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ABSTRACT

The general purpose of the publication is to provide a resource guide for the development and evaluation of objective based programs of pupil personnel services (PPS). The emphasis throughout is upon the continuous and integrated nature of program development and evaluation, rather than as separate processes that are discrete in purpose, content, and time. This guide was designed for the use of local program developers and evaluators, State level leadership personnel, trainers of professional personnel, and independent evaluators. (Author)

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PUPIL PERSONNEL SERVICES

A Handbook for Program Development and Evaluation

U.S. DEPARTMENT OF HEALTH,
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This is the fifth and final phase of the National Guidance Evaluation Study initiated within the Office of Education in 1966. The study originally was designed in four phases:

- Taxonomy Development and Variable Definition
- Instrumentation
- Sample Selection
- Data Collection and Analysis

This handbook puts into meaningful and useable form (for State and local educational agencies) the concepts and procedures for evaluation growing out of this study.

The activity which is the subject of this publication was supported in whole or in part by the Office of Education, U.S. Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

PUPIL PERSONNEL SERVICES

A Handbook for Program Development and Evaluation

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Foreword

This handbook was developed as a guide for program development and evaluation of pupil personnel services (PPS). An objective based approach was used for the development of a systems model that integrates program development with evaluation as a continuous process. The emphasis throughout the handbook is upon practical procedures for developing and evaluating PPS programs, but hopefully sufficient theory has been interspersed to provide a sound basis for the practical. The handbook will probably be most useful for local school personnel in planning and evaluating programs, however it is designed to also serve as a resource for staff development. Thus, State and local directors, and training institutions may find the material useful.

The material for this handbook has been developed over more than a ten year period in a number of Federal, State, and local projects. The primary aim of the evaluation aspects of these projects was to find better ways to demonstrate the effectiveness of PPS. The actual evaluations were, therefore, structured to assess the impact of programs on pupil change. Process descriptions and process evaluations were developed only in the later years of the work and have not been field tested as thoroughly as the outcome evaluation suggestions.

Many people have contributed to the development and testing of the materials presented in this handbook. The continued encouragement and support of the professional staff of the U. S. Office of Education has made the preparation of the handbook possible. Many State and local directors, and counselor educators across the Nation have contributed their ideas and materials through conferences and publications. Particular acknowledgement is due the three consultants to this project who reviewed the organization and some parts of this manuscript. Their suggestions were very helpful in the early development of the handbook. They were: Edwin L. Herr, Pennsylvania State University, Anita M. Mitchell, Culver City Unified School District, and Giles Smith, Iowa State Department of Public Instruction.

Table of Contents

Page

Foreword i

Table of Contents ii

Part I. EVALUATION CONCEPTS, APPROACHES, AND MODELS

Chapter 1. Introduction 1

Need and Rationale 1
Status of PPS Evaluation 2
Problems and Issues in PPS Evaluation 12
Organization of the Handbook 14

Chapter 2. A Systems Model for Outcome Evaluation 18

Introduction 18
Review of Evaluation Models 20
Development of the Systems Model 24
The Revised Systems Model 36
Summary 50

Chapter 3. A Taxonomy of Pupil Personnel Objectives 54

Introduction 54
Rationale 55
Dimensions of the Taxonomy 57
Examples of PPS Outcome Objectives 65
  Educational Domain 68
  Vocational Domain 76
  Social Domain 86
Suggestions for Source Materials in Developing Objectives 93

Part II. IMPLEMENTATION OF A PROGRAM DEVELOPMENT AND EVALUATION MODEL

Chapter 4. Introduction 95

Evaluation Based Program Development 95
Evaluation Based Program Development Input and Output 100

Chapter 5. The Defining Stage 103

Defining Needs 103
Stating Goals and Objectives 114

Page

Chapter 6. The Structuring Stage 121

Process Structuring 121
  Process Needs Assessment 126
  Prototype Testing 134
  Guidelines 134
Evaluation Design 136
  Formulation of Hypotheses 137
  Specification of Comparison Base 139
  Identification of Participants 144
  Determination of Analysis Procedures 147
Evaluation Structuring 150
  Instrumentation 150
  Scheduling Data Collection 154
  Staffing for Data Collection and Processing 159
  Budgeting for Evaluation 159

Chapter 7. The Implementing Stage 162

Process Implementation 162
  Questions to be Asked 162
  Procedures to be Used 162
  Description of Activities 169
Evaluation Implementation 175
  Collection of Outcome and Process Data 175
  Analysis of Evaluation Data 177

Chapter 8. The Validating Stage 179

Introduction 179
Questions to be Asked 180
Procedures Used 180
  Goal Attainment 181
  Process Documentation 187
Reporting Evaluation Results 191
  Technical Reports 192
  Professional Reports 193
  Lay Reports 195
Utilization of Evaluation Reports 196
  Staff Development 196
  Program Decisions 197
  Administrative Decisions 198
  Professional and Public Dissemination 199

APPENDIX A. Examples of Objectives Development and Needs Assessment Forms and Procedures 201

APPENDIX B. Examples of Outcome Instruments and Procedures 208

APPENDIX C. Examples of Process Monitoring and Reporting 269

Part I

EVALUATION CONCEPTS, APPROACHES, AND MODELS

Chapter 1

Introduction

The general purpose of this publication is to provide a resource guide for the development and evaluation of objective based programs of pupil personnel services (PPS). The emphasis throughout is upon the continuous and integrated nature of program development and evaluation, rather than as separate processes that are discrete in purpose, content, and time. This guide was designed for the use of local program developers and evaluators, State level leadership personnel, trainers of professional personnel, and independent evaluators.

Need and Rationale

The need for a systematic approach to the development and evaluation of PPS programs has been recognized for many years, however the primary expression of need has tended to be on evaluation rather than program development. The justification for the establishment and maintenance of PPS programs (guidance in particular) has been based upon prima facie evidence with little concentrated effort to examine the validity of such evidence. Wellman and Twiford (1961) noted that "the defense of many elements of the guidance program is based on logical reasoning rather than on scientific evidence, and it can only be concluded that at present their value is hypothetical." Metzler (1964) concluded that the field was operating on assumptions and information of questionable validity. There has been much material published during the last ten years that indicates a good deal of progress has been made in developing methods for attacking this problem. There has, however, been surprisingly few reports of evaluative evidence that can be used by program and administrative decision makers. Decisions regarding the establishment, maintenance, modification, and continuation of PPS programs and activities should have a firm foundation of evidence of effectiveness. The educational community can no longer afford the luxury of judging effectiveness from public popularity, legislative authority, and unsupported professional judgment.

The need for a systematic approach to the evaluation problem has been accentuated by the demand for accountability in education. Insistence for provisions to demonstrate accountability have come from Federal, State, local, and public sources, and practically all specially funded programs now require evaluation. There have been hundreds of articles, and several books, written in support of and suggesting methods for being accountable. A number of negative responses have also appeared in an effort to resist the pressure to produce objective evidence of effectiveness. Pupil personnel services have been no exception in the general push for accountability, however the major thrust has been more toward holding the instructional services accountable than the special services. A review of the many accountability publications is beyond the scope of this publication, however some issues relating to evaluation are discussed in another section below. One conclusion seems obvious in 1975, that is, pupil personnel workers can no longer be content with being responsible only for carrying out a service; they must also assume some responsibility for the consequences of that service.

The willingness and ability of pupil personnel workers to assume responsibility for the consequences of their services requires input information that will enable them to establish reasonable expectations for pupil outcomes under specified conditions. The knowledge that such outcomes can be expected can be gained only from the feedback of experience. Thus, the feedback from previous experience is the product of evaluation. This evaluation input is information that will support decisions relative to program provisions, resources, activities, modifications, and adoption or rejection. In a general sense then, any informational input that will enable better program decision making can be considered the product of the evaluation process. Hence, the basic theme of this guide is that evaluation is not an end product but a means to better program development. If this position can be accepted, then PPS workers should not view evaluation and accountability as a threat, but rather as an opportunity to gain information for improving programs, for professional growth, and for more effective results in helping pupils (Wellman, 1971). The following discussion of the status of PPS evaluation attempts to point out what has been done and some of the major voids that need attention.

Status of PPS Evaluation

Studies to determine the effectiveness of PPS programs in producing specified outcomes have rarely appeared in the professional literature. The assessment of guidance programs has been undertaken more often. However, these studies have usually been less than comprehensive and conducted so loosely that firm effectiveness conclusions were not possible. The counseling function has been the subject of hundreds of studies of both process and outcomes. The counseling function is, of course, only one part of the PPS process that may have an impact on pupils. In 1968 Tamminen and Miller observed that

> Faith, hope, and charity have characterized the American attitude toward guidance programs - faith in their effectiveness, hope that they can meet important if not always clearly specified needs, and charity in not demanding more evaluative evidence that the faith and hope are justified (p. 2).

There is little evidence that the situation has changed greatly since that time, in spite of increasing pressure from the public and funding agencies for accountability.

Comprehensive reviews of studies relevant to guidance, counseling, and psychotherapy have been published periodically in a number of sources. The reader interested in such reviews may find the following references helpful.

1. Annual Review of Psychology, Annual Reviews, Palo Alto (See particularly Vol. 24, 1973, pp. 117-150, and Vol. 26, 1975, pp. 337-366, and 509-556)
2. Review of Educational Research (See Volumes 27 (1957), 30 (1960), 33 (1963), 36 (1966), and 39 (1969))
3. Miller, G. D., Gum, M. F., and Bender, D. Elementary School Guidance: Demonstration and Evaluation. Minnesota Department of Education. St. Paul. 1972 (pp. 7-37)
4. Tamminen, A. W. and Miller, G. D. Guidance Programs and Their Impact on Students. Minnesota Department of Education. St. Paul. 1968 (pp. 5-14)

A few efforts related to the assessment of PPS programs and outcomes are reviewed below. These studies were selected as being representative of major attempts to attack the evaluation problem and because they have either a direct or historical relationship to the evaluation approach proposed in this publication. These studies could be classified in terms of major emphasis (process or outcome), setting, program component, or subjects used in the evaluation. Such a classification has not been made due to the difficulty in arriving at discrete classifications of comprehensive and complex studies.

Academic and post-graduation employment achievements and behaviors of high school students were investigated in early evaluation studies reported by Rothney and Roens (1950) and Rothney (1958). Both of these studies reported positive results for students having received counseling. The latter study compared outcomes for counseled and noncounseled students and produced consistent, although not spectacular, differences favoring the counseled students. They showed somewhat better academic achievement (including post high school education), progress in employment, and satisfaction with their educational experiences.

College students have been the subjects for many studies of the effects of counseling. The accessibility of college students and the academic setting for such studies has produced innumerable dissertation studies and journal articles, as well as a few books. A major study of the outcomes of counseling in a university counseling center was reported in a book by Volsky, et al (1965). The results of this study failed to support the efficacy of counseling for producing the outcomes investigated. The authors, however, made a significant contribution to a better understanding of some of the methodological and criterion problems in outcome studies. They observed that the variability among clients and counselors makes the study of global outcomes for generalizations about counseling as a process difficult and perhaps ill advised. Somewhat more positive results were reported by Campbell (1965) in a follow-up of college students 25 years after receiving counseling. He found that the counseled students excelled slightly over the noncounseled group on economic and social criteria.

The various States and the U. S. Office of Education have made regular assessments of guidance resources available in the school systems of the nation. This accounting of the number of counselors available in relation to the number of schools and pupils has been helpful in estimating the accessibility of personnel and facilities, but has not provided answers to the effectiveness question. Reports of resources surveys have given evidence of progress (USDHEW, 1964) and need (Smith and Eckerson, 1966), as well as helping define the nature of services available.

The need for information to keep the Congress apprised of the accomplishments of programs funded under Title V-A of NDEA resulted in the initiation of a series of evaluation activities that have involved State and local school personnel throughout the nation. The Office of Education sponsored a series of national and regional conferences and workshops to consider the needs and methods for the review and evaluation of guidance programs. The input from these groups was published in an OE Bulletin that suggested content and forms for describing guidance programs along with other general considerations regarding evaluation (Wellman and Twiford, 1961). This bulletin recognized the importance of using behavioral outcomes as criteria for the evaluation of guidance program effectiveness, but did not provide for specific procedures to utilize this type of evaluation. The USOE sponsored research seminars at the University of Georgia in 1961 and at the University of Michigan in 1962 to discuss the status, needs, and problems of research in guidance and counseling. These seminars gave particular attention to problems in evaluating the effectiveness of counseling and suggested a model to account for relevant variables in imposing controls and determining interaction effects. This model is discussed in Chapter 2, and provided the impetus for designing the National Study of Guidance.

The USOE developed a tentative research proposal in 1963 to evaluate the effectiveness of guidance using behavioral outcomes. After extensive critiques by researchers and practitioners across the nation, the Office of Education awarded contracts to Neidt and Proff to develop a detailed research design and to prepare abstracts of related studies (Neidt, 1965; Proff, 1965).

The general purpose of the proposed National Study of Guidance was "to identify factors of guidance process that are uniquely related to changes in the behavior of students" (Neidt, 1965, p. 2). The Neidt design suggested that the initial study be planned in four phases: (1) the development of taxonomies and operational definitions of variables to be included in each of the four variable domains, i.e., process, criterion, student, and situational; (2) instrumentation and field testing of instruments; (3) sample selection; and (4) data collection and analysis. The University of Missouri was awarded a contract in 1966 to carry out Phase I of the project. This part of the project was completed in 1968 (Wellman, 1968) however funding was not available to continue the project with a national sample, as originally planned. The work completed on the NSG was not totally lost however. The taxonomies developed provided the point of departure for the development of objective-based PPS programs in a number of States; the basic model was used in the evaluation of several Title III projects (see report of project SUCCESS below); and, the cumulative experience in field testing the NSG materials provided the basic materials for the preparation of this handbook.

During the same period (1965-68) the State of Minnesota conducted a comprehensive study of the relationship between guidance program inputs and student outcomes (Tamminen and Miller, 1968). The study used many of the same design characteristics proposed for the NSG, and was based on data collected from a 20% stratified sample of the high schools in Minnesota. The study analyzed the relationships among a complex matrix of variables including 46 input (process) variables, 35 situational variables, and 28 outcome variables. Relationships among these variables were analyzed in an attempt to determine the predictability of outcomes. This study did not use a control group and the interpretation of the large number of possible relationships was extremely difficult. This exploratory study did, however, establish some relationships that should be quite suggestive for hypotheses that could be tested experimentally. The following excerpts from the final report represent findings of the major guidance relationships investigated.

1. "The best guidance programs tend to be in schools where they are least needed." The schools where these programs were found had students who "have good ability, come from advantaged homes in advantaged communities, and where the school climate encourages scholastic excellence." (p. 136)

2. "In schools where the average ability is low and the school climate anti-academic, counselors tend to spend more time with 'problem students'." (p. 136)

3. "While most guidance efforts are interrelated with situational factors, a few are relatively independent, especially the ones entitled 'counselor image' and 'superficiality of student'counselor contacts'. These are factors that do not tend to show up any more in advantaged situations and good schools than in poorer situations." (p. 136)

4. "If there is one guidance 'input' that can with confidence be said to have an effect on hoped for outcomes, it is the personality of the counselor, as perceived by students and observers. The aspects of personality referred to here are warmth, acceptance, openness, respect for and interest in students and effectiveness in contacts with staff. This factor is related to satisfaction with guidance, good holding power, incidence of continued education, amount of help received from guidance programs (as reported a year after graduation by two different groups of students), and, to a lesser degree under-achievement, unrealistically high vocational aspirations, and self-concept (in one-counselor schools). All of the relationships are in the expected direction. None of the other factors measuring guidance effort came close to having the number and strength of relationships to outcomes that counselor image does." (pp. 136-137).

5. "Satisfaction with guidance depends primarily on how good the program is, and how well it is supported." (This relationship was found to be more pronounced in low-ability schools than in high-ability schools.) (p. 137)

6. "Aside from counselor image, measures of guidance efforts appear to have little if any relationship to the holding power of schools." (p. 138)

7. "High general and academic self-concept does not seem to be related to any aspect of guidance programs, or indeed of any measured aspect of the situation, not even family advantages." (p. 138)

8. "Continuing education, like holding power, is not related to guidance program measures other than counselor image, but is related to ability, academic atmosphere, and other situational factors." (p. 138)

Other relationships found in this study indicated that lower ability students were less vocationally mature and had more of a tendency to have unrealistic vocational aspirations. Also, a year after graduation students who had better guidance opportunities and more contact with their counselor tended to recall getting more help and were more satisfied with the guidance program. This study has many implications for the structuring of variables for study in other evaluation efforts.

The Minnesota Department of Education sponsored another study that examined variables related to the implementation and effectiveness of a developmental guidance model in the elementary school (Miller, Gum, and Bender, 1972). This study used a sample of pupils, parents, counselors, and teachers at the second and fifth grade levels to investigate (1) model implementation, (2) model effectiveness, and (3) relationships among pupil, staff, parent, and outcome variables. The results of this study were quite complex and difficult to interpret. In general some support was found for the developmental model, however it seemed that the teachers still leaned toward favoring remedial counselor functions, and the pupil outcome variables had little relationship to counselor functions. The study made significant procedural contributions in the specification of process, outcome, and staff relationship variables. Also, the instrumentation used in the study may be useful for future evaluation studies.

The most numerous guidance evaluation studies have described aspects of program activities and/or used consumer opinion (pupils, teacher, parents, etc.) to evaluate program activities. A study reported by Roeber (1963) to determine how counselors spend their time is typical of the descriptive studies.

In this study, time allocations were studied irrespective of guidance outcomes. Junior and Senior High school counselors in the Pontiac, Michigan, school district completed daily log sheets for four ten-week periods. A panel of judges established four major categories of counselor activities with ideal time estimates for each: (1) Helping Relationships (70%), (which included counseling (50%) and consulting (20%), (2) Research (10%), (3) Professional Development (meetings) (10%), and (4) Other Guidance Activities (10%). Roeber's analysis of the counselor logs revealed the following actual time utilization of these counselors: (1) Helping Relationships (55%) (consulting 15%, and counseling 40%), (2) Research (4%), (3) Professional Development (8%), and (4) Other Guidance Activities (21%). Non-guidance activities accounted for 12% of counselor time, although ideally the counselor would not have been involved in these activities.

The amount of time the counselors were released (free) for counseling proved to affect the results significantly. An increase in released time per day increased the amount of time spent in helping relationships and some non-guidance activities, while research activities remained constant. Professional development was greatest when periods released were less than two school periods per day. Other guidance activities also increased as released periods decreased.

Instruments were developed and field tested by Hill and Nitzschke (1960) to obtain student and parent opinions about the guidance program. They used three schools in Ohio to develop the student and parent questionnaires. These instruments were designed to evaluate several aspects of the guidance program: awareness of guidance availability, amounts and sources of help received, degree of satisfaction with the received help, and relevance of the guidance services to the students. The results indicated that college-bound students (male and female) generally had more positive reactions to the guidance programs than did the non-college bound students. Also, in small schools without organized guidance programs, there were uniformly favorable reactions to the principals and teachers who provided guidance functions; this finding supports staff involvement in school guidance programs. Although the parents' questionnaire proved to be too brief to be of much value, Hill and Nitzschke advocated parent involvement in school guidance efforts with more encompassing means than an occasional questionnaire.

Two separate studies have been reported that have particular significance for pupil personnel services (Kaczkowski, 1972, and Wellman, 1971). Both of these studies produced evidence that guidance and PPS do make a difference in pupil performance and behavior.

The Illinois Demonstration Center program in Elementary Guidance and Counseling was the setting for the study of the elementary school counselor's role and effectiveness (Kaczkowski, 1972). The major activities of these counselors were individual counseling, classroom guidance, and small group work. The pupils included in the study were either self-referred or teacher referred with initial interpersonal or intrapersonal problems. The referred pupils in the lower grades tended to have more problems related to meeting the demands of the school, while problems in the upper grades were more in the area of peer and family relations. The program emphasis was on affective development in the school setting, rather than upon remediation.

Several measures of effectiveness were used in this study and the major findings, as reported by Kaczkowski (1972), are summarized below.

1. "In the opinion of the teachers, counseling had a positive impact on the current behavior of the pupils... ...325 of 429 counseling cases had demonstrated some type of positive change." (p. 29)
2. "The counselor's opinion of the direction and degree of change produced in the counseled pupils was highly similar to that of the teacher." (p. 29)
3. Precounseling and postcounseling teacher ratings of pupil behavior in the areas of "(1) adequacy in being a student; and (2) manifestations of expressed behavior," showed "an overwhelming change in the conduct of the children who were counseled." (p. 29) These behavioral changes were all statistically significant and support the conclusion that the elementary school counselor can be a significant influence in helping pupils become more effective in meeting school demands and in their peer relations.
4. The reduction of test anxiety in these elementary school pupils was not supported.
5. The pupils perceived the counselor as being helpful in "understanding themselves and their behavior better and in helping them be more successful in school." (p. 53)

This study is also a valuable resource regarding methodology for describing process and for instrumentation to obtain feedback from pupils and teachers. Also, valuable suggestions are given for defining and communicating the counselor's role.

A three year longitudinal evaluation of Project SUCCESS in Cobb County Georgia, was reported by Wellman(1971). This project was funded as a demonstration project under Title III, ESEA for the three year period 1968-71. The project consisted of a comprehensive program of pupil personnel services designed to identify and solve learning problems of pupils in grades one, two, and three. The program was made available to grade one pupils in 1968-69, grade one and two pupils in 1969-70, and to grade one, two, and three pupils in 1970-71. Thus, it was possible to observe the 1968-69 grade one pupils for a three year period. The primary evaluation aim was to collect evidence that would permit statements regarding the effects of the program in producing specified pupil outcomes.

The evaluation design included (1) four experimental schools where the comprehensive PPS were implemented, (2) four control schools where no PPS were provided, and (3) an independent control group that was drawn from other schools in the county for some of the achievement comparisons. The primary outcome measures were the Metropolitan Achievement Tests (MAT), and the Behavior Maturity Scale (BMS), a teacher rating of each pupil's academic, social, and emotional behavior. The MAT was administered in April of each year as a posttest measure, and the BMS was administered in October and April for gain analysis, as well as comparisons with the control pupils. Additionally, differential effectiveness of the PPS was analyzed with respect to sex and diagnostic classification of the pupils. The diagnostic types included (1) average, (2) slow maturing, (3) slow learner, (4) environmentally disadvantaged, (5) accelerated learner, (6) emotionally disturbed, (7) neurologically handicapped, and (8) educable mentally retarded. Comparisons were made among these subgroups where the number of pupils was adequate. More than 1000 experimental pupils and a comparable number of control pupils provided the data for this evaluation, with data for the full three year period from 250 experimental pupils and 290 control pupils. The principal outcome analyses involved comparisons between the experimental and control pupils with respect to growth and academic achievement. Statistical significance at the .05 level was required to accept differences on all gain and group comparisons.

The results from this evaluation showed rather conclusively that comprehensive PPS do make a difference in the development of pupils in the primary grades. The major findings included the following:

1. The educational achievement of pupils in the experimental schools was better than that of concurrent controls and baseline criterion groups. The experimental pupils excelled over the control pupils in 66% of all comparisons of educational achievement during the three years and the controls failed to excel in a single comparison. Also, the superior achievement attained by the experimental pupils during the first year was maintained through the following two years.

2. Differential effectiveness of the PPS program was found with regard to areas of educational achievement, and sex and type of the pupils. The impact of the program was greater in the area of verbal achievement than in numeral achievement; the boys showed substantially greater achievement differences over their control counterparts than did the girls; and, the slow learning and environmentally disadvantaged pupils achieved significantly higher than the control pupils much more often than did the average or accelerated pupils. Thus the evidence supported the effectiveness of the PPS program for improving verbal achievement with boys and with pupils who might be expected to have learning difficulties more than with girls and with the average or superior pupils.

3. The experimental pupils had slightly better gains in task-oriented, social, and emotional behaviors than did the control group, but these differences were not as consistent as in the area of educational achievement.

The impact of this PPS program on pupil achievement and behavioral development was well supported, but many other important evaluation questions were left unanswered. This was a total program evaluation and the relative effectiveness of specific techniques was not examined. The intensity of services was rather high in this project, and no attempt was made to determine how many more pupils, if any, could have been served without reducing effectiveness. Also, perhaps the most significant unanswered question was how the effects of the program observed during the first three years in school may be related to pupil development in subsequent years.

In summary the status of PPS evaluation in the mid 70's indicates that there is much to be done. A great deal of attention has been given to the need for evaluation, but very few good and comprehensive evaluations have been reported. Hundreds of studies have dealt with the effectiveness of counseling, but few have investigated the impact of total programs. The continued emphasis upon process or program evaluation as opposed to pupil outcomes is still prevalent, however there is some evidence of increasing attention to outcomes per se. Finally, the need for good comprehensive evaluations was never more apparent than now. Economic and social pressures, as well as increased acceptance of PPS as an integral part of the total educational program, dictate that systematic efforts be made to determine the most effective and efficient ways to achieve the PPS objectives. PPS program improvement is dependent upon such input.

Problems and Issues in PPS Evaluation

Most of the problems and issues applicable to the evaluation of education in general, and instruction in particular, are also relevant to the evaluation of PPS programs. Technical problems related to evaluation, such as sampling, design, and instrumentation, apply to all types of educational evaluation and are adequately discussed in most of the major evaluation references (e.g. Anderson, et al, 1975, Stufflebeam, et al, 1971, Worthen and Sanders, 1973) and are treated later in this handbook. Also, many of the social and political issues apply to PPS as much as to other areas of educational evaluation. These issues include the role of the evaluator, the threat of evaluation to the program staff, the social effects of evaluation, and the relationships of funding agencies to the evaluation process (Alkin and Fitz-Gibbon, 1975, Record and Record, 1975, Ornstein, 1975, and Ornstein and Berlin, 1975).

There are, however, some evaluation problems that are of somewhat more concern in the evaluation of PPS, and other special services programs, than in the case of the evaluation of instruction. Some of these problems are identified below along with a brief discussion of the general position taken in this handbook.

First, the strong PPS emphasis on the individual pupil gives rise to the question of whether program objectives can be developed for groups of pupils that will be applicable to the individual pupil. Instructional objectives tend to be designed for groups and may even be applicable to a total school system, all schools in a State, or even the Nation. PPS objectives suitable for evaluation should certainly be appropriate for the pupils being served, both as groups and as individuals. The position taken here is that both group and individual objectives should be considered in the development and evaluation of PPS programs (see Chapter 3). Objectives that are developmental in nature can be formulated for specified groups of pupils, such as social responsibility for first grade pupils. Equally important are the highly individual objectives for pupils who have unique needs that may not be common with the group, such as extreme disruptive behavior in group situations. In the first instance the evaluation may determine the effectiveness of PPS in achieving developmental objectives for a group, and in the second case the PPS effectiveness in improving individual adjustment.

Second, PPS are normally organized as a constellation of services that include a wide variety of activities. Total program evaluation assumes that the achievement of certain developmental objectives and outcomes should result from the organized complex of services to large groups of pupils. Obviously some PPS activities contribute more directly to some outcomes than to others, and consequently definitive cause and effect relationships are difficult to establish from program evaluation information. The alternative is to conduct evaluations of specific activities designed to achieve specific objectives. If specific PPS activities are evaluated in isolation from the other program activities few inferences can be drawn regarding the total program impact, but valuable information can be obtained to assess the effectiveness of the target activity. On the other hand, total program evaluation is necessary to provide the information needed to make professional and administrative decisions. Therefore, it is recommended here that the program evaluation be structured from a systematically organized series of activity evaluations, that is a number of specific PPS activity evaluations can provide the information needed to reach judgments about the total program (See Chapter 2). In this manner each of the major services and the associated activities can be evaluated using criteria relevant to the specific objectives of the service, and the total evaluation package can then obtain information to estimate the relative effectiveness of the various services and activities, and to make statements regarding total program impact.

Third, typically PPS objectives are heavily weighted toward the affective domain as opposed to the cognitive emphasis of most instructional programs. The affective emphasis presents some problems in conducting clean and conclusive evaluations. Affective changes are usually measured from self-reports or from behavioral observations as a basis for affective interpretations. These are in reality indirect measures from which affective inferences are made. Also, direct intervention into the individual's affective development is more difficult and usually longer range than in dealing with changes in cognitive behaviors. Thus, it is more difficult to demonstrate the impact of the PPS program on the affective development of pupils. Although the achievement of affective objectives is difficult to evaluate, such objectives should not be abandoned. Increased efforts need to be made to measure affective behaviors more objectively, and to improve our ability to make affective interpretations of cognitive and behavioral observations.

Finally, PPS objectives are more vulnerable to influence from external (non-program) variables than are most instructional objectives. Behavioral outcomes related to the pupil's academic, social, and emotional development and adjustment are usually specified in PPS objectives, but are subject to influence by family, teacher, and peer variables. The complexity of external influences upon the expected PPS outcomes complicates, but does not nullify, our ability to demonstrate the effect of PPS on such outcomes. The evaluation design can provide controls for the influence of such external variables (see Chapter 6). An experimental design that provides for the random assignment of pupils to a program group and to a control group will permit statements to the effect that any observed differences between the two groups was due to program variables since any external variables presumably had equal influence on each of the two groups.

In summary the evaluation of the effectiveness of PPS presents problems that are more complex than in the evaluation of instruction. As more comprehensive evaluations of PPS are conducted, the input of information and experience should facilitate the major objectives of evaluation - program improvement. This handbook was developed to assist State and local officials in meeting this evaluation challenge.

Organization of the Handbook

This handbook is organized in two parts. Part I discusses some of the theoretical concepts relevant to evaluation approaches and the formulation of PPS objectives, and Part II treats the implementation of PPS program development and evaluation.

Chapter 2 develops a systems model for outcome evaluation. The model proposed may be used for any educational program and may be adapted for either program evaluation or the evaluation of specific program activities.

Chapter 3 presents a conceptual framework for the formulation of PPS objectives, and a proposed taxonomy of such objectives. Examples of general developmental objectives and behavioral objectives for four different grade groups are provided to assist local personnel in the specification of program objectives.

Chapter 4 discusses the basic structure and flow charts for program development and evaluation. The implementation structure proposed follows the systems model developed in Chapter 2.

Chapter 5 makes suggestions for the defining phase of program development and evaluation. The procedural sequence moves from needs identification, to making goal statements, to the specification of performance objectives and outcomes.

Chapter 6 addressed the tasks of structuring program development and evaluation. Process development and descriptions are treated in terms of needs, objectives and strategies. Evaluation designs are discussed and plans for implementing the evaluation are considered with suggestions for scheduling, staffing, and budgeting.

Chapter 7 discussed the actual process of implementing the program and evaluation plan. Process installation, inprocess evaluation and modification, and data collection and analysis are discussed with suggestions for organization and procedures.

Finally, Chapter 8 makes suggestions for the use of process and outcome evaluation information in assessing the program process and the outcomes observed. The use of evaluation information for administrative, professional, and public purposes is discussed with examples of the types of reports applicable to the various evaluation purposes.

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Chapter 2

A Systems Model for Outcome Evaluation

Introduction

The basic model or approach to evaluation provides the structure for a systematic pursuit of answers to the high priority evaluation questions. The model is the track on which the evaluation process runs. It is in a sense the road map that alerts the evaluator to the best route, essential turns, and possible obstacles in getting where he wants to go. It specifies the kinds of inputs and controls that will be needed to obtain the kind of outputs desired.

The crucial a priori consideration in selecting or developing an evaluation model is the determination of the needed outputs from the evaluation. Most evaluation outputs can be viewed as answers to questions that are relevant to professional or administrative decisions concerning the pupil personnel services program. These questions usually relate to either the PPS process, the effectiveness of the process, or a combination of the two. Examples of typical questions that may be asked at the point of structuring the evaluation of a PPS program are:

Are the program provisions and activities consistent with the recommended professional standards?

Were the program strategies and activities implemented in accordance with the a priori program plan?

What resources are required for the conduct of the PPS program as planned?

How does the PPS program support other program operations in the institutional setting?

What are the organizational requirements for coordination of the PPS program with the total institutional operation?

What situational conditions are positively or negatively related to the functioning of the PPS program?

What is the community and/or the professional staff response to the PPS program?

What is the consumer (pupil) response to the PPS program?

How does the PPS program affect the educational, vocational, and social development of pupils?

How does the PPS program affect specific pupil behaviors?

What are the differential effects of the PPS program on pupil development or behaviors with respect to pupil characteristics and/or situational variables?

What are the differential effects of the PPS program on pupil development or behaviors with respect to process or program variations?

To what extent can the observed effects of the PPS program be generalized to other situations and other pupil populations?

What is the relative effectiveness of different PPS program strategies and activities in producing specified outcomes?

Can the observed outcomes of the PPS program be defended in terms of contributions to the broader goals of the institution?

Are the observed outcomes of the PPS program sufficiently significant to justify the cost?

What is the most desirable PPS program for a given institution, serving a specific pupil population, when measured against the achievement of developmental and behavioral objectives and the resources available?

Answers to questions of this type are quite important in making professional and administrative decisions regarding the nature of, and perhaps even the need for, a PPS program in a school system. Few of these questions can be answered directly when stated in the global terms shown above. They can be answered, however, by operationally defining the dimensions and variables involved, investigating the relationships among the variables, and drawing inferences that have a direct bearing upon the general question. It is in this process of reducing broad global questions to manageable dimensions, that the evaluation model becomes essential to the evaluation process. The model provides the evaluator with a structure for (1) defining variables, (2) designing the evaluation, and (3) proceeding step by step through the evaluation to conclusions that answer the evaluation question(s).

Review of Evaluation Models

The numerous suggestions, approaches, and models for the evaluation of educational processes, including guidance and pupil personnel services, have for the most part been directed toward certain rather global process or outcome questions. They have served to provide some information relative to procedural status, and in a few cases outcome effectiveness; but perhaps most important they have highlighted the need for more comprehensive models that can be used to structure multiple-purpose evaluations. The purpose of this chapter is to present a model that is flexible enough to be used in a variety of situations, and comprehensive enough to permit the investigation of process status, outcome effectiveness, and the interactions between process, situational, pupil, and outcome variables. The following review of other models and approaches to evaluation is presented as a background for the development of the proposed systems model.

The major approaches that have been proposed for the evaluation of educational processes in general and PPS programs in particular can be categorized roughly as: (1) those emphasizing the description of program provisions and activities using external professional or administrative standards as the evaluative criteria; (2) those emphasizing outcomes with minimal attention to process and cause and effect relationships; and (3) those emphasizing the cause and effect relationships between process and outcomes including provisions for controls and interaction analyses. The latter group, in varying degrees, incorporate some aspects of a systems approach with periodic feedback at decision points.

The Federal Security Agency, Office of Education, published (restricted distribution) criteria for the evaluation of secondary school guidance programs (Benson, 1949). These criteria were developed as a systematic approach to describing the adequacy of guidance program provisions in the school, and covered the areas of (1) administrative bases, (2) staff, and (3) services. The school was asked to provide descriptive data about the pupil population, community influences, and anticipated influences. These data were then used to determine which criteria were most important to the particular school. The conditions and provisions in each of the content areas were described with a checklist, and were then evaluated by response to questions on a five point scale. The evaluator was instructed to use "personal observation and judgment" in making the evaluation rating. The global and rather subjective terminology used in these evaluation instruments, such as "satisfactory," "average," and "limited," made definitive conclusions difficult, however this start toward the evaluation of PPS programs did provide the school with some direction in assessing the strengths and weaknesses of its guidance program.

The National Study of Secondary School Evaluation (1960) published evaluative criteria for guidance services, with the purpose of determining both the consistency of the practices with the school's objectives and the fulfillment of the needs of the school and community through these objectives. Checklists and evaluations, similar to Benson's, were used, but the format was extended to make it somewhat more precise. The evaluative categories included the general nature and organization of guidance, staff, and services, plus sections for general evaluation and special characteristics. The evaluation questions encompassed large areas that resulted in a global evaluation of the situation rather than the evaluation of the achievement of specific objectives.

The legislative requirement to report the effectiveness of guidance, counseling and testing programs funded under the authority of NDEA, Title V-A, provided the stimulus for a series of USOE sponsored conferences and workshops, and for the subsequent publication of suggestions for State and local program evaluation (Wellman and Twiford, 1961). Evaluative processes were categorized into three levels in this document: (1) appraisal for determining the present status of a program; (2) assessment for determining needed program modifications and desired directions; and (3) evaluation for determining the utility and effectiveness of the program in reaching the stated objectives. One contribution of this publication was the suggestions for the development of program objectives and rather carefully designed instruments and procedures for collecting and analyzing evaluative data. Also, research studies of pupils were suggested for the purpose of providing data to determine needed program direction and emphases.

Other evaluation suggestions and approaches with primary emphasis upon process provisions and procedures include publications by Rafferty, 1967; Moore, 1961; and Hill and Nitzschke, 1960.

The Navy Department developed a system for project control in 1958, that was known as the PERT (Program Evaluation and Review Technique) system. This model presented a systems approach to the planning and implementation of any number of activities. PERT provided a logical sequence of the management cycle that began with the definition of the project objectives. The four major components of the cycle were planning, organizing, motivating, and controlling. These components established a network of events and activities that could be systematically put into operation. A series of steps in this system that incorporate the assessment of such factors as time, cost, and performance allowed for replanning and recycling as needed. Although the PERT system was not developed for the purpose of evaluating educational programs, it provided a useful structure for the development of systems models for educational evaluation and for management by objectives. Characteristics of the PERT model are obvious in most of the systems models that are referenced below. (Cook, 1966)

The desirability of describing the effectiveness of a guidance program in terms of some resulting observable behavior has been stressed by many who have been concerned with evaluation models (Popham, 1969; Tyler, 1967; Mager, 1962). Wellman and Twiford (1961) noted that "Guidance programs exist to serve students, either directly or indirectly. The primary objectives of guidance programs all relate to student behavior and development. Therefore, the only true measure of the value of the guidance program must be in terms of what happens to students." (p. 26)

Emphasis on the end product, rather than letting the process dictate the evaluation, has become a priority in many of the recent evaluation attempts. Concern with this issue was implied by Tyler, et al (1967) in the statement that "Our present instruments are products of assumptions and conditions that do not properly apply to some of our current needs for evaluation." (p. 15) They suggested goal-referenced models as a safeguard against the models becoming ends in themselves. Thus, means to the goal remain flexible, while objectives are deemed of high importance, and unexpected events can be incorporated into the system. This position was further supported by Popham (1969) in the statement that "Our assessment of teaching competence, ... should be based on the instructor's ability to achieve desired ends; and should not relate at all to his use of particular means." (p. 44)

The problem of clarifying the confusion arising out of the differentiation and relationship of process and outcome evaluations has received the attention of a number of evaluators and is taken into account in many of the current models. The terms "formative" and "summative" evaluation were introduced by Scriven (1967). The evaluation of a program under development and implementation was labeled as formative evaluation in that it permitted program revisions or changes. Summative evaluation, on the other hand, occurred at the completion of the program for the purpose of assessing the effects or outcomes. Thus, formative evaluation procedures assist in attaining summative evaluation results. A two-dimensional framework for formative evaluation was suggested by Sanders and Cunningham (1973). In their model, sources of information (contextual, external, and internal) formed a matrix with different evaluation activities (predevelopment, evaluation of objectives, interim, and product) to insure thorough consideration of aspects involved in devising and organizing an evaluation plan.

The role of the evaluator to judge as well as describe data has been incorporated in an evaluation matrix designed by Stake (1967). The description and judgment of data are each separated into three conditions - those existing prior to the program, those occurring during the activity, and those resulting as outcomes. This matrix not only allowed for congruence checks to compare intended with actual observations, but also provided a means to determine contingencies among the conditions.

Stake (1969) also proposed a five-step guideline (model) for establishing an evaluation program. First, objectives are stated, including the affected populations and expected decisions. Next, the program is delineated by consideration of such aspects as tactics, aims, standards, subject matter, and setting. An analysis of gains and losses, costs and resulting side effects of the program outcomes is then completed, after which trends and contingencies are established. Finally, the outcomes are judged to determine their value and utility.

One of the earlier systems models designed specifically for the evaluation of educational programs, and with promise for the evaluation of PPS programs, was developed by Evaluation Programs for Innovative Curriculums (EPIC) for use in the evaluation of programs under ESEA, Title III. The EPIC plan included the four phases of planning, implementation, product, and recycling. Phase I (planning) included the identification and description of variables and objectives, the specification of the evaluation design, and the establishment of a monitoring system and calendar of events. Phase II (implementation) initiated Phase I with data collection and constant feedback to indicate and support any needed modifications. Phase III (product) included the analysis of collected data to determine the extent to which the Phase I objectives were attained. The final phase, recycling, involved the feedback of evaluation information for the modification of Phase I, thus the evaluation output provided input for continuous planning decisions.

A comprehensive systems model designed for maximum decision-making utility of evaluation outputs was proposed by Stufflebeam, et al (1971). This model incorporated two basic criterion models - one, determining the desired ends, and the other developing how to proceed to these desired ends. Four types of evaluation were suggested as factors that affect the steps of the decision-making process. "*Context* evaluation serves planning decisions to determine objectives; *input* evaluation serves structuring decisions to determine project designs; *process* evaluation serves implementing decisions to control project operations; and *product* evaluation serves recycling decisions to judge and react to project attainments." (Stufflebeam, et al, 1971, p. 218) This CIPP model procedurally moves from the initial steps of *awareness* and *design* where options are identified and specific criteria are determined for assessment purposes; to the central stage of *choice* where decision rules are applied and information is collected for each decision alternative; to the final stage where the resulting choice is either confirmed and applied to *action* or rejected and recycled. In this conceptualization evaluation is most significant in the *action* stage where the output of the planning decisions is analyzed and judged.

Development of the Systems Model

The systems model for program development and evaluation proposed here has been developed over a period of more than ten years with inputs from many individuals across the nation, and from the results of field testing in local level ESEA, Title III and career education projects. The current model has evolved from a number of attempts to provide the needed structure for comprehensive evaluation. The key revisions of the model during the development period are discussed below.

Research needs and suggestions for research in counseling and personnel services were the primary topics considered by the Cooperative Research Seminar at the University of Michigan in 1962. An analysis of outcome research in the field led this group to the conclusion that most of the reported research had been concerned primarily with either process or outcome variables, and that the true relationship between the two had seldom been investigated. They also found almost a complete absence of research that attempted to account for the influence of student and situational variables on the process-outcome relationship. They concluded that effective evaluation research in counseling and personnel services needed to be based upon a model that would not only specify the relevant categories of variables but would also permit a study of the interactions among these variables. The model shown in Figure 1 was suggested as a guide for researchers to use in the specification of variables, and in the identification of possible interactions.

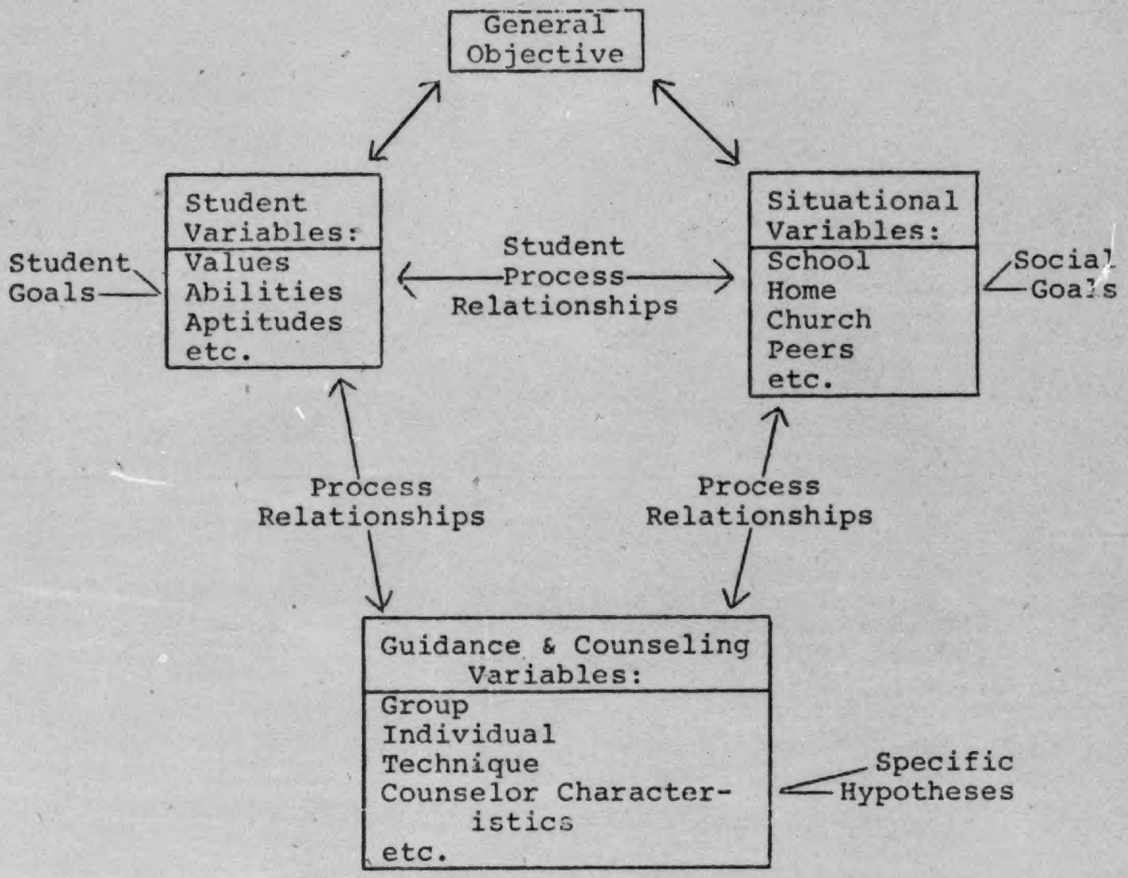
General Objective
Student Variables:
Values
Abilities
Aptitudes
etc.
Student Goals
Student Process Relationships
Situational Variables:
School
Home
Church
Peers
etc.
Social Goals
Process Relationships
Process Relationships
Guidance & Counseling Variables:
Group
Individual
Technique
Counselor Characteristics
etc.
Specific Hypotheses

Figure 1

The research design proposed by Neidt (1965) for the study of the relation of guidance practices to student behavioral outcomes utilized the Michigan model for the specification of four classes of variables: (1) criterion variables, (2) process variables, (3) situational variables, and (4) student variables. Neidt presented a simplified model that showed the relationship between these major classes of variables, but divided the criterion measures into two classes, initial for cross-sectional studies, and final for longitudinal studies. (Figure 2)

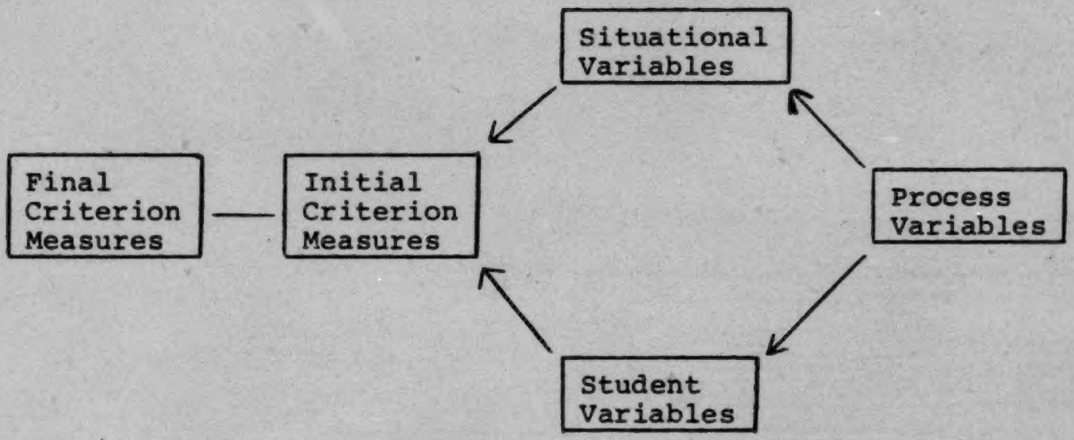

Figure 2

The four categories of variables in the above model provided the stimulation for the development of the taxonomy of guidance objectives, and the classification schemes for process, situational, and student variables that were a major part of phase I of the National Study of Guidance (Wellman, 1968).

The Neidt model was expanded into a systems model that more clearly identified the inputs, outputs, and controls for the evaluation design (Figure 3). Also, this version of the model introduced the procedural flow of evaluation and the feedback for process modification. This model became the basic outline for the specification of variables in the taxonomies and classification schemes suggested in the plan for a National Study of Guidance (Wellman, 1968). The basic features of the model were described by Wellman as follows:

> The systems model provides a structure for determining the relationship between major input variables (process) and output variables (behavioral outcomes) in either an experimental design to estimate cause and effect, or an association design to identify correlations for the generation of experimental hypotheses. Additionally, the differentiation among students and situations, as well as interactions of these variables, permits a degree of statistical control and interpretation that may lead to the kind of differential conclusions needed for definitive process evaluation. This structure is believed to have the potential for "continuous" feedback for process modification in the light of outcome evidence, and perhaps ultimately to provide for a better understanding of the relationship between one

National Study of Guidance Systems Model for Evaluation

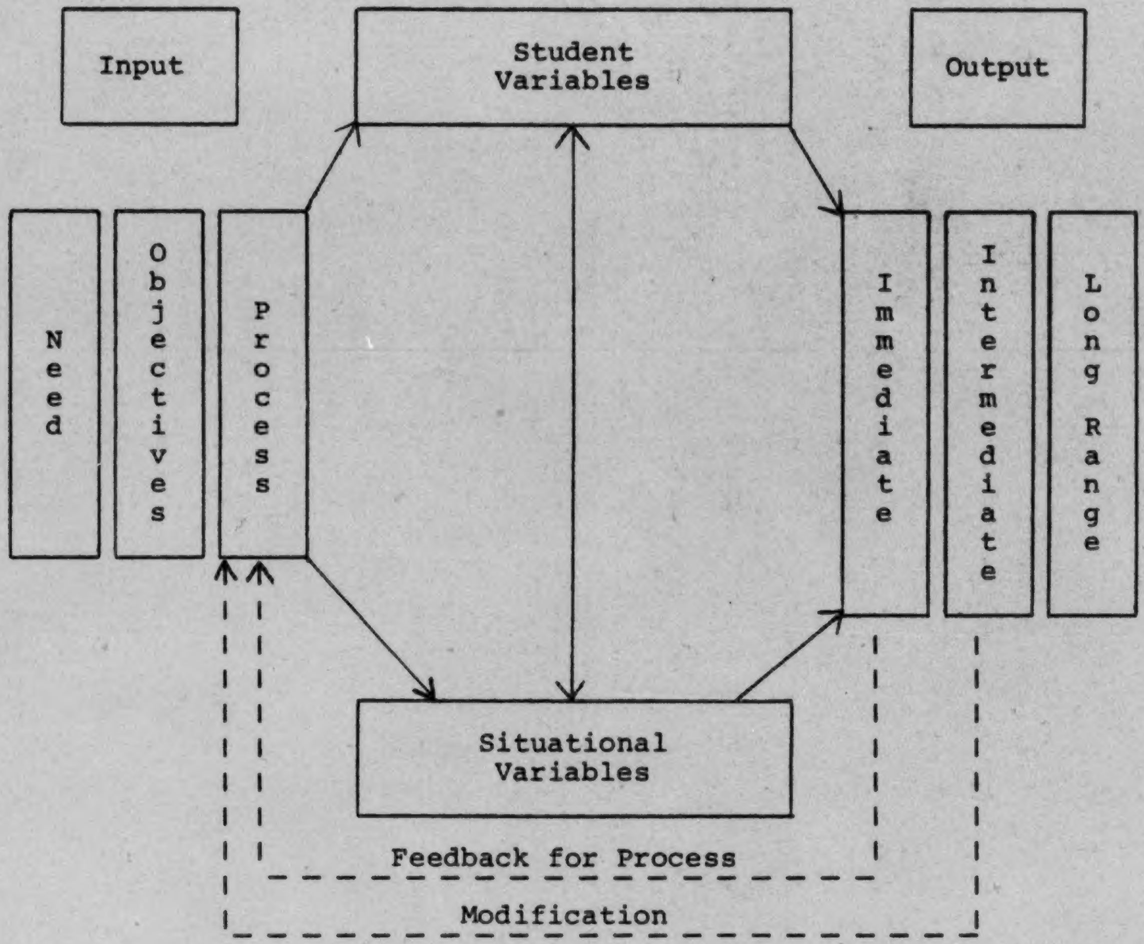
Input
Student Variables
Output
Need
Objectives
Process
Immediate
Intermediate
Long Range
Situational Variables
Feedback for Process
Modification

Figure 3

Neidt-Wellman
1967

> change and subsequent changes. Stated another way the impact of change upon change is hypothesized to be related to interaction effects as opposed to a chain of sequential events. (p. 6)
>
> The implementation of this type of evaluation model is largely dependent upon the ability to identify, define, and measure relevant variables. This is considered to be much more important than the accuracy with which the variables are classified into the major categories of the model. (p. 8)

This model, along with the accompanying taxonomy of guidance objectives, provided the point of departure for a wide variety of evaluation studies (primarily with Title III, ESEA projects) in a variety of settings, and in a number of different states. Also, the work initiated in the National Study of Guidance was modified and built upon by other groups striving to develop meaningful and practical models for the evaluation of pupil personnel services. One of the most comprehensive efforts to translate this model into a practical guide for local school use was a project underwritten by the California State Department of Education and funded by Title V-A, National Defense Education Act of 1958. A task force of State and local personnel produced a preliminary document entitled A Process Guide for the Development of Operational Objectives (California State Department of Education, 1970). The original taxonomy of guidance objectives, developed for the National Study of Guidance, was conceived as a guide that could be used for the derivation of meaningful and manageable outcome criteria in the evaluation of pupil personnel services programs. The California group used it in just the manner intended. The basic areas of objectives had been classified in three domains of development, relatively universal to all students, namely educational, vocational, and social development. Three levels of development were designated within each of the domains to permit a hierarchical structuring of outcome objectives. These levels were somewhat equivalent to a developmental sequence moving from short-range outcomes, to intermediate outcomes, and finally to long-range outcomes. The following outline shows the developmental levels and the major categories for classifying guidance objectives within this taxonomic structure:

1.0 PERCEPTUALIZATION OBJECTIVES - The development of awareness and differentiations of relevant environmental and self variables.

    1.1 Environmental Orientation - Knowledge and understanding of educational, vocational, and social opportunities, requirements, and expectations.

1.2 Self Orientation - Knowledge and understandings of abilities, limitations, identities, feelings, and motivations relevant to educational, vocational, and social development.

2.0 CONCEPTUALIZATION OBJECTIVES - The process of analyzing relationships, making predictions, evaluating consequences, and taking actions relevant to educational, vocational, and social goals.

2.1 Directional Tendencies - Formulation of decisions and plans, and the development of interests and value attachments which result in increasing stability and consistency in movement toward educational, vocational, and social goals.

2.2 Adaptive and Adjustive Behavior - Development of coping behavior to meet educational, vocational, and social requirements and expectations.

3.0 GENERALIZATION OBJECTIVES - The development of a behavior pattern typified by consistency, commitment, effectiveness, and autonomy.

3.1 Accommodation - The psycho-social ability to cope with cultural and environmental demands.

3.2 Satisfaction - The internal self interpretations of environmental transactions.

3.3 Mastery - The congruency of expected or predicted achievement with external criteria of achievement.

The California group, using the NSG model and taxonomy, proposed an operational model that could be used by local guidance personnel in planning and evaluating PPS programs. They suggested that each guidance objective be stated explicitly in terms of the applicable constraints, that is (1) the situation (situational variables) or the time and space context within which an action is to take place; (2) the population (student variables) or a specific decription of the group for which the objective is intended; (3) the treatment (process) or a precise definition of the guidance program input proposed to achieve the objective; and (4) the outcomes (criteria) or the output expectancy in terms of the measurable nature or extent of change expressed in the objective. Also, in their subsequent publication Accountability in Pupil Personnel Services: A Process Guide for the Development of Objectives (California Personnel and Guidance Association, Monograph Number 3, 1971) the terminology of the three levels of the NSG objectives were changed from perceptualization to awareness, from conceptualization to accommodation, and from generalization to action. The interpretations and extensions of the original model by this group was a major step in translating what was basically a research model into a logical and meaningful operational model for use in the local school program.

The NSG model was being field tested, concurrently with the work in California, from 1968 to 1971 in Missouri, Georgia, Alabama, and Indiana. Also, the model was used in numerous workshops on evaluation for teachers, counselors, and administrators. The experience with the model in actual evaluation efforts and in attempting to communicate evaluation concepts and procedures to professional groups provided evidence that simplification and clarification was needed to make the model feasible for local school personnel who do not have the benefit of the services of experienced evaluators. Some of the points that seemed to give the most difficulty included the following:

1. The idea of starting with pupil needs and then designing a program to meet the needs seemed to be threatening to those who have a commitment to a particular program or process. The result is a tendency to want to state objectives for the program and not for the pupils.

2. The reduction of the global goals of most schools, and PPS programs, to manageable objectives and measurable outcomes was not only a laborious task for most groups, but it also represented a threat to the subjective evaluations with which they had become comfortable. The need was evident that the relationships between goals, developmental objectives, performance objectives, and outcome criteria should be made more explicit, and that procedural steps should be specified for operational purposes. The goals and developmental objectives given as examples in the original taxonomy were not sufficient in themselves to enable teachers and counselors to develop performance objectives and outcomes that could be used for program planning and objective evaluation.

3. The purposes of the evaluation process and the use of evaluation results for administrative and program decisions were difficult concepts to communicate. The idea of using the evaluation to improve and strengthen a program was all too often secondary to the need to comply with an administrative order or a funding regulation requiring evaluation. Greater emphasis needed to be given to the feedback feature of the model, and to the use of evaluation results in the professional decision-making process.

These observations of the inadequacies in the 1968 model led to the development of another model that identified procedural steps more clearly, and that illustrated the systems flow and feedback as an integrated and continuous process rather than a series of discrete steps leading to a final end result. This model (Wellman, 1971) is shown in Figure 4. The use of this model for the development of meaningful and manageable objectives was explained in terms of those model components directly related to the objective building process as follows: (Wellman, 1971)[1]

The systems model for guidance program development and evaluation provides a framework for the conceptualization of the guidance program in terms of (1) general and specific pupil objectives and outcomes, and (2) program objectives and strategies designed to achieve the pupil objectives. The flow moves from the general to the specific in the development of objectives, with the more specific representing those kinds of objectives and outcomes for which guidance personnel should be willing to assume responsibility and to be held accountable. The following explanations of the first four components of this model are directed toward (1) working definitions, and (2) relationships in the systematic flow from need to outcome.

1. NEEDS. Needs are defined here to include those long range developmental needs of individuals and the general social needs of the society that justify the existence of a guidance program. They provide the underlying rationale for the program and the basis for developing goals and objectives. Such needs should be related to the guidance program but by their broad global nature may involve many other programs, people, and circumstances.

   Needs relevant to this model originate from two basic sources (1) human development theories, and (2) social needs in a democratic society. Those theoretical formulations most directly related to the guidance program include career development theories, personality theories, learning theories, and human need and development theories. The theory or theories that undergird any local guidance program should be identified and used to build the rationale for the development of pupil goals and objectives, including the part that guidance activities may play in the total educational,

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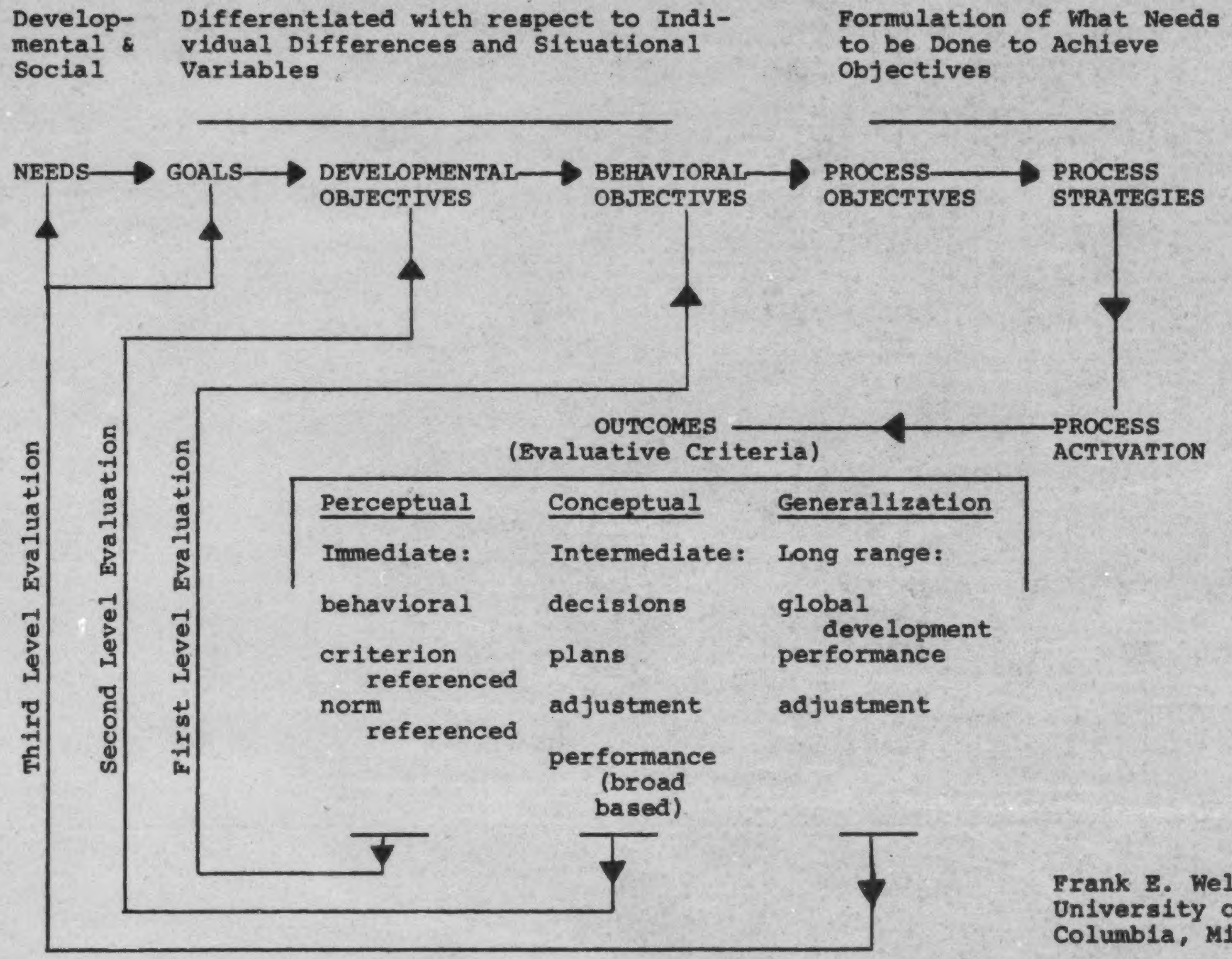
[1] Excerpts from an address delivered at Ohio Workshop on the Development of the Guidelines for Planning Career Development Programs K-12, June, 1971.

SYSTEMS MODEL FOR GUIDANCE PROGRAM DEVELOPMENT AND EVALUATION


Developmental & Social
Differentiated with respect to Individual Differences and Situational Variables
Formulation of What Needs to be Done to Achieve Objectives
NEEDS
GOALS
DEVELOPMENTAL OBJECTIVES
BEHAVIORAL OBJECTIVES
PROCESS OBJECTIVES
PROCESS STRATEGIES
PROCESS ACTIVATION
OUTCOMES (Evaluative Criteria)
Perceptual
Immediate:
behavioral
criterion referenced
norm referenced
Conceptual
Intermediate:
decisions
plans
adjustment
performance (broad based)
Generalization
Long range:
global development
performance
adjustment
Third Level Evaluation
Second Level Evaluation
First Level Evaluation

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vocational, or social development of individuals. The basic social needs are less directly related to pupil-centered guidance objectives, but should have a direct bearing upon the program rationale. For example, individual economic self-sufficiency may represent a general social need related to contributions of the guidance program, but the broad and remote nature of the need suggests that there will be many factors, other than guidance, influencing the outcome. Specification of needs is desirable to build a foundation from which goals and objectives can be stated in more meaningful and manageable terms.

2. GOALS. Goals are the reasonably long range operational delineations of needs. They are more specific than needs, but still too far removed and too confounded by other influences to serve as workable objectives for the guidance program. Goals take on relevance for individuals, in that they will vary among individuals and from one situation to another. The general need for all individuals to become vocationally competent is thus defined in terms of goals that specify that a particular individual complete a training program that will qualify him to enter a specific occupational area consistent with his abilities and interests. Goals represent rather large global areas of achievement or development that lead to meeting specified needs, and provide the point of departure for the formulation of developmental and behavioral objectives.

3. DEVELOPMENTAL OBJECTIVES. The developmental objectives relate to the guidance related developmental steps that are logically, and usually sequentially, related to the stated goals. For example, before an individual can achieve the occupational competence goal stated above, there are a number of vocational and educational decisions that need to be made. Each such decision can become a developmental objective for the guidance program. Likewise, a series of plans may need to be formulated and these can become objectives. Certain situational adjustments may also relate to the goal as may intermediate range performance, such as, completion of prerequisite courses and curricula. Thus, many developmental objectives may be formulated to operationally define the hypothesized guidance contributions to a single goal. Again, it is easy to see that the achievement of many developmental objectives may be influenced

by other factors, and the related guidance activity may be only one small part of a rather complex process. There are, however, many developmental objectives for which guidance personnel should be willing to assume major responsibility. Developmental objectives have particular significance in differentiating desired outcomes for different age and grade groups. For example, the objective to develop an appreciation for work in everyone's life may be quite relevant for a primary grade group, while the junior high school group may need to develop an appreciation for work as a very personal part of their lives. Each developmental objective should be stated and related to the program so that the part that guidance may contribute is clearly understood. This can be done through the formulation of behavioral objectives.

4. BEHAVIORAL OBJECTIVES. Behavioral objectives should specify in concrete terms the knowledge, skill, or performance that is expected. These objectives should be related directly to a specific guidance activity and at least logically to a developmental objective. Behavioral objectives are usually short range in terms of time and should always be related to specific criteria for determining whether the objective has been achieved, and often the degree of achievement. The developmental objective to make a decision regarding post high school education may provide the basis for specifying relevant behavioral objectives that spell out the kinds and extent of awareness of self and environment needed to make the decision. The developmental objective requires that the individual conceptualize self in the educational-vocational situation. This conceptualization requires that he be aware of his abilities, interests, resources, etc., and of the environmental opportunities, requirements, etc., and, that he be able to demonstrate such awareness by showing that he has specific knowledge of these relevant variables. Behavioral objectives are crucial to adequate program development, they provide the most objective basis for evaluation, and they make developmental objectives and goals meaningful by defining sequential developmental relationships in terms of behavior that can be described from observation, objective measurement, and self-reports. For example, comprehensive career development theory can provide the basis for determining behavioral objectives appropriate to the maturity level of the pupils and related to the sequential developmental objectives that lead to the longer range vocational goal.

General procedural guidelines for the development of guidance objectives were suggested by Wellman (1970) in the following excerpt.

> "The specification of meaningful objectives and the use of appropriate criteria to estimate the achievement of objectives are essential for adequate evaluation. The difficulties encountered in accomplishing these tasks have, no doubt, discouraged many guidance workers from undertaking comprehensive outcome studies. The basic requirements for stating . . . guidance goals, objectives, and outcomes follow the major parts of the systems model with the added criterion of feasibility imposed at each step in the process.
>
> 1. Objectives should be oriented to identified student needs (educational, vocational, and social).
>
> 2. Objectives should be consistent with societal values and professional philosophy.
>
> 3. Objectives should be stated so they can be translated into expected behavioral outcomes (relevant to the primary purposes of the guidance program).
>
> 4. Behavioral outcomes should be defined operationally so that they can be quantified in terms of knowledge, skills, performance, and attitudes.
>
> 5. The data needed and methods for measuring and reporting behavioral manifestations should be specified for each objective and outcome.
>
> 6. Objectives and outcomes should meet the test of relevancy for the student sample (such as, grade level, sex, etc.) and the operational situation (such as, type of school, demographic characteristics, etc.).

The 1968 model (Figure 3) and the 1971 model (Figure 4) were field tested in the evaluation of ten different PPS programs in a variety of settings and geographical locations, and were used in workshops and direct assistance to State and local personnel in planning and implementing their own evaluation. These experiences provided the input for some conclusions regarding the value of the model, needed revisions, and suggestions for using it in program development and evaluation.

First, the model did provide a valuable guide to help local school staffs to see the relationships between program planning, implementation, and evaluation. Also, it assisted in the conceptualization of the flow of the evaluation process from the assessment of needs to the end of assessment of outcomes and the use of evaluation results for programmatic decision making. However, the model and materials were too complex and comprehensive to communicate the concepts and process to most personnel who did not have the opportunity to work through the process step by step in their own program. The need for simplification and clearer explanations of purposes and requirements of each step in the model was evident, if the model was to be useful for those working independently in their own programs.

Second, it became increasingly evident that no one evaluation procedure could be applicable universally to all programs. The essential steps in the model applied quite well across programs, but the variations in the implementation of the evaluation had to be fit to the uniqueness of the pupils, the program, and the situation. Thus, there was a need to point out the kinds of alternatives that could be employed in each step of the planning and evaluation process.

Third, the staff concluded that the essentials of a comprehensive evaluation model could be specified, and that a model and accompanying guidelines could be developed that would have value in PPS program planning and evaluation across most target populations, programs, and institutional situations. To this end the original NSG taxonomy of objectives has been revised (see Chapter 3), and Part II of this guide was designed to provide a step by step procedure for implementing the revised model, hopefully a "how to do it" guide based on actual experience and on reports of procedures and techniques used in other projects across the country.

The Revised Systems Model

The following list of essential characteristics for a comprehensive evaluation model were used as a general guide in the current revision of the evaluation model:

1. The model should be adaptable to a wide range of developmental and/or social needs that may be met, at least in part, by the activities of PPS programs. (Needs are interpreted here as individual or societal deficits - differences between a present state and a specific goal that can be supported by empirical data or theoretical formulations.)

2. The model should provide for the reduction of broad developmental and/or societal needs to (1) meaningful goals, and subsequently to (2) manageable [operationally measureable] objectives and outcomes that are hypothetically related to the PPS process.

3. The model should permit the statement of goals and objectives designed to accommodate the identified needs of (1) individual pupils, or (2) an aggregate of pupils. (Specific adaptive behaviors, for example, may apply to an individual pupil, while general developmental behaviors may be applicable to an aggregate of pupils, e.g. age group, ethnic group, curricular group, etc.)

4. The model should be adaptable to a wide variety of PPS strategies regardless of the theoretical orientation followed or the organizational structure of the services. (Value judgments regarding orientation or organization should provide a basis for evaluative hypotheses, but should neither dictate nor limit the basic evaluation model - the results of evaluation should provide evidence for the assessment of value judgments.)

5. The model should provide for the inclusion of relevant classification variables that can be used to describe the pupils served and the situational context. (The inclusion of pupil and situational variables provides the basis for the determination of differential effectiveness, and for inferences regarding the generalization of evaluative findings.)

6. The model should require the statement of process objectives, the explicit description of process strategies, and the specification of process resources and dynamics. (These are the primary independent variables that are subject to experimental management, and are crucial to feasibility and transportability decisions.)

7. The model should be useful and adaptable to a variety of evaluation designs, such as, experimental, between group comparisons, within group change, etc., that may be selected to seek evidence for inferences regarding the relative effectiveness of a specified PPS process (program or activity), with a defined population, in a given situational context. (See section on evaluation designs.)

8. The model should provide for periodic feedback of information relative to (1) the implementation of program strategies in accordance with preprocess plans, and (2) progress toward the achievement of the projected outcomes. (Flexibility for inprocess modifications in the light of new evidence is essential to decisions based upon continuous feedback.)

9. The model should provide for postprocess feedback in terms of the extent to which the process and product objectives were achieved. (This feedback should be explicit and comprehensive in presenting data that will permit the estimation of the probability that specific outcomes can be achieved under specified conditions with a clearly identified population. Additionally the outcome report should give an estimation of the process resources, operational conditions, and situational constraints associated with the observed outcomes.)

10. The model should provide for the integration of program development, implementation, and evaluation as a systematic and comprehensive process, as opposed to separate processes. (The interrelatedness of the variables relevant to program development and implementation with the variables essential to comprehensive evaluation precludes independent specification and analysis of variables in separate categories.)

The revised 1973 model, shown in Figure 5, is the result of attempting to incorporate the above characteristics into one comprehensive model. This model is essentially a reinterpretation of the 1971 model with several notable additions. (1) It more clearly identifies the essential steps in working through the program development and evaluation system. (2) Basic variables, functions, considerations, and alternatives are identified in each step. (3) The flow of the systems model along with check points and inprocess feedback are more clearly indicated to emphasize the continuous nature of the process, as well as the flexibility of the model and the possibilities of inprocess modifications. (4) The dynamics of the systems approach is more clearly illustrated in the feedback of information for determining program priorities, needed modifications, feasibility and validity of goals and objectives, and the applicability of the program rationale employed.

This model is explained below in an outline of functional steps that follow a sequential order of procedure for program development and evaluation. Also, the implementation suggestions found in Part II were designed for use with the revised 1973 model.

SYSTEMS MODEL FOR PROGRAM DEVELOPMENT AND EVALUATION

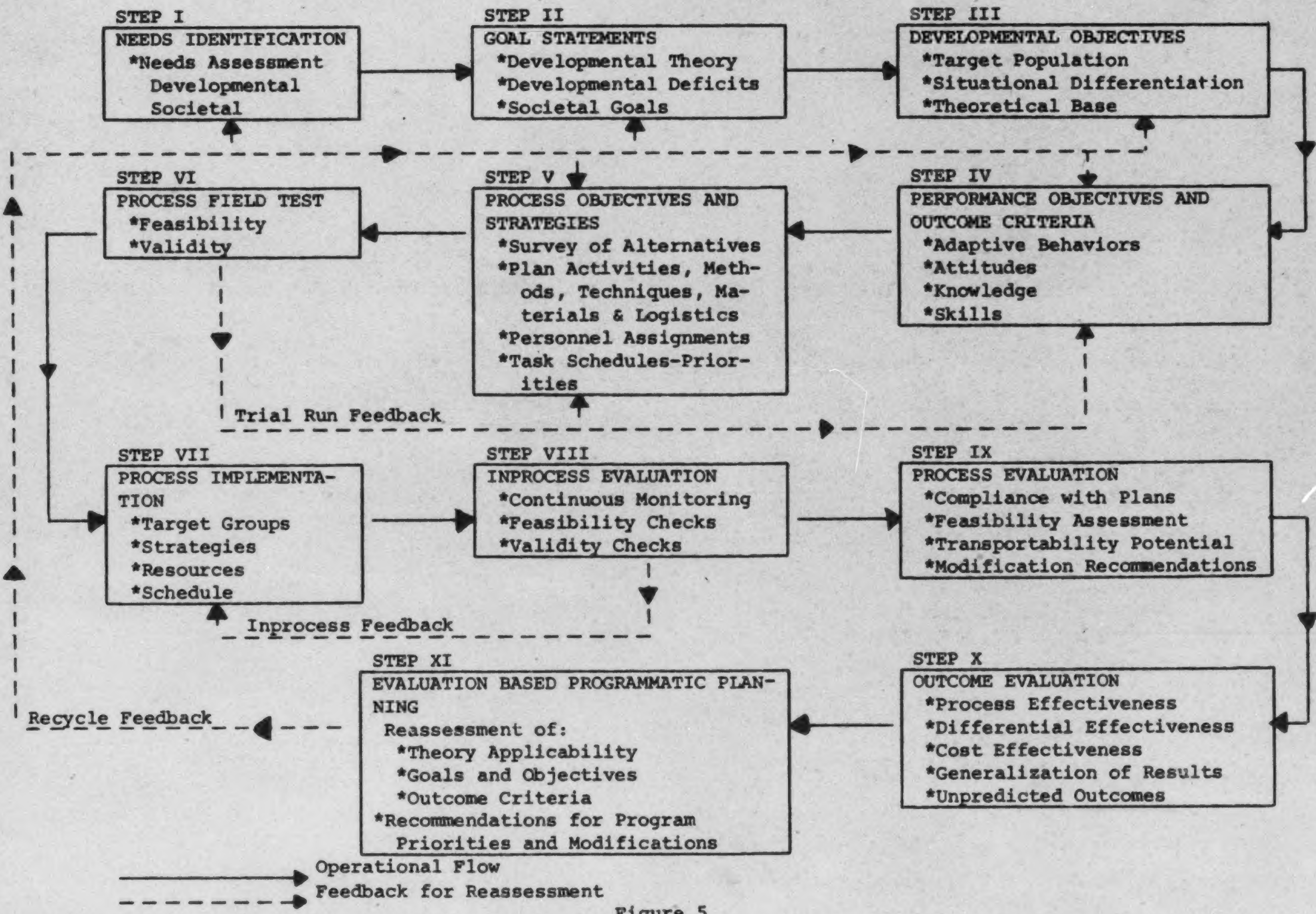
STEP I
NEEDS IDENTIFICATION
*Needs Assessment
Developmental
Societal
STEP II
GOAL STATEMENTS
*Developmental Theory
*Developmental Deficits
*Societal Goals
STEP III
DEVELOPMENTAL OBJECTIVES
*Target Population
*Situational Differentiation
*Theoretical Base
STEP VI
PROCESS FIELD TEST
*Feasibility
*Validity
STEP V
PROCESS OBJECTIVES AND STRATEGIES
*Survey of Alternatives
*Plan Activities, Methods, Techniques, Materials & Logistics
*Personnel Assignments
*Task Schedules-Priorities
STEP IV
PERFORMANCE OBJECTIVES AND OUTCOME CRITERIA
*Adaptive Behaviors
*Attitudes
*Knowledge
*Skills
Trial Run Feedback
STEP VII
PROCESS IMPLEMENTATION
*Target Groups
*Strategies
*Resources
*Schedule
STEP VIII
INPROCESS EVALUATION
*Continuous Monitoring
*Feasibility Checks
*Validity Checks
STEP IX
PROCESS EVALUATION
*Compliance with Plans
*Feasibility Assessment
*Transportability Potential
*Modification Recommendations
Inprocess Feedback
STEP XI
EVALUATION BASED PROGRAMMATIC PLANNING
Reassessment of:
*Theory Applicability
*Goals and Objectives
*Outcome Criteria
*Recommendations for Program Priorities and Modifications
STEP X
OUTCOME EVALUATION
*Process Effectiveness
*Differential Effectiveness
*Cost Effectiveness
*Generalization of Results
*Unpredicted Outcomes
Recycle Feedback
Operational Flow
Feedback for Reassessment

Figure 5

OUTLINE OF PROCEDURAL STEPS FOR IMPLEMENTING THE SYSTEMS MODEL FOR PROGRAM DEVELOPMENT AND EVALUATION

STEP I - FROM NEEDS ASSESSMENT TO GOALS STATEMENTS

NEEDED INPUTS (Evidence of Need)	**EXPECTED OUTPUTS** (Goal Decisions)
1. Developmental Theory Intellectual/educational Social/emotional Career	1. Goal statements based upon needs supported by developmental theory appropriate to the population to be served.
2. Developmental Assessment/Deficits Educational achievement Self-reports of attributes and concerns Observational reports of teachers, peers, parents, and significant others Behavioral descriptions - group/individual	2. Goal statements based upon empirical evidence of developmental deficits.
3. Societal Expectations or Concerns Societal accommodation - developmental/corrective Order Responsibility Change Legal-ethical-moral Educational Self/social purposes	3. Goal statements based upon recognized societal expectations for personal-social development.
Vocational Self fulfillment and contributions Economic and social contributions	4. Goal statements based upon identified societal concerns relevant to groups or individuals.

STEP II - FROM GOALS STATEMENTS TO DEVELOPMENTAL OBJECTIVES SPECIFICATION

NEEDED INPUTS (Goal amplification)	EXPECTED OUTPUTS (Developmental Objectives)
1. Goal Statements (Developed in STEP I)	1. Formulation of developmental objectives that define each goal statement in terms of an area of development appropriate to the target population and based upon theoretical relationships and/or empirical observations.
2. Theoretical Relationships of goals to Human development Adaptive behavior	2. Tentative formulation of hypotheses, or assumptions, that sequentially relate the developmental behaviors, reflected in the objectives, to the goal statements.
3. Empirical Support for goals related to Human development Adaptive behavior Social "norms"	

STEP III - FROM DEVELOPMENTAL OBJECTIVES TO PERFORMANCE OBJECTIVES SPECIFICATION

NEEDED INPUTS (Amplification of developmental objectives)	EXPECTED OUTPUTS (Performance or outcome objectives)
1. Developmental Objectives (Developed in STEP II)	1. Formulation of performance objective that define each developmental objective in terms of specific knowledge, skills, attitudes, or adaptive behaviors that sequentially relate (hypothetically) to the desired developmental behaviors.
2. Analysis of specific knowledge, skills, attitudes, or adaptive behaviors that comprise the desired development for the target population.	

STEP IV - FROM PERFORMANCE OBJECTIVES TO THE SPECIFICATION OF PROCESS OBJECTIVES AND STRATEGIES

NEEDED INPUTS (Objectives and Resources)	EXPECTED OUTPUTS (Process Decisions)
1. Developmental and Performance Objectives (Developed in STEPS II and III)	1. Formulation of process objectives in terms of what (activities, techniques, materials, etc.) should be provided and done, for whom (target population), by whom (personnel identity and responsibility), and when (time schedule).
2. Evidence of relationship between optional process strategies and the desired developmental and behavioral outcomes. (Experience and reported effectiveness)	2. Identification of process strategy options that are plausible and feasible to progress operationally toward the achievement of the process and in turn the outcome objectives.
3. Analysis of resources (personnel, materials, facilities, organization, etc.) available to implement the process strategies under consideration.	3. Generation of hypotheses regarding the relative effectiveness of the various process strategy options in contributing to the achievement of the process and outcome objectives.
4. Professional judgment (may be subjective) regarding staff, pupil, and community acceptance and support of the strategies under consideration.	4. Determination of process strategies to be utilized based upon available evidence of feasibility and estimated probability of effectiveness in achieving process and outcome objectives.

STEP V - FROM PROCESS STRATEGY TO FEASIBILITY AND VALIDITY TESTING

(An optional step to be used in the absence of experience with the strategy in the proposed situation and with the proposed target population)

NEEDED INPUTS (Strategy field testing)	**EXPECTED OUTPUTS** (Feasibility and validity decisions)
1. Field tryout of selected process strategy with sample of pupils representative of target population, and under conditions that approximate the proposed implementation conditions.	1. Determination of strategy feasibility for full-scale implementation in terms of resources, logistics, responses, etc. related to the achievement of the process objectives.
2. Analysis of field testing feedback (data if appropriate) in terms of proposed process and outcome objectives - did it operate as planned and was there evidence of effectiveness as hypothesized in STEP IV?	2. Estimation of the accuracy of the validity predictions for the strategy to contribute to the achievement of the outcome objectives.
3. Subjective evaluation (reaction) of the field test by involved staff and the pupils in the test sample.	3. Final determination for proceeding with the implementation of the strategy (with modifications if indicated), or for rejecting the strategy and proceeding to the testing of alternative strategies.

STEP VI - FROM PROCESS OBJECTIVES AND STRATEGIES TO PROCESS IMPLEMENTATIONS

NEEDED INPUTS (Operational plans)

1. Process Objectives
   (Developed in STEP IV)

2. Process Strategies and
   Implementation Plans
   (Developed in STEPS IV and V)

EXPECTED OUTPUTS (Program activation)

1. Full implementation of process strategies in accordance with the predetermined plans for (a) target groups, (b) activities, techniques, materials, etc., (c) personnel functions and responsibilities, and (d) time schedule.

STEP VII - FROM INPROCESS EVALUATION TO PROCESS MODIFICATION DECISIONS

NEEDED INPUTS (Inprocess information)	EXPECTED OUTPUTS (Formative evaluation decisions)
1. Inprocess feedback from continuous process monitoring.	1. Determination of the need for inprocess modifications to bring about closer alignment of process implementation with process objectives and strategies.
2. Analysis of feedback information in terms of congruency of actual process implementation with preprocess plans - was the process implemented in accordance with the predetermined plans and if not why?	2. Determination of the need for a tentative restructuring of outcome objectives and criteria in the light of implementation experience and outcome progress.
3. Analysis of feedback information in terms of progress toward projected outcomes.	3. Storage of feedback information for use in interpreting postprocess evaluation results - particularly important in determining the point in time when effects are observed.
4. Analysis of feedback information for cues or indications of unanticipated process effects.	

STEP VIII - FROM PROCESS EVALUATION TO PROCESS CONCLUSIONS AND DECISIONS

NEEDED INPUTS (Process evaluation information)

1. Process history with regard to structure, operation, and dynamics - as recorded from process monitoring and documentation.
2. Analysis of process provisions relevant to the evaluation including policies, organization, and resources such as, personnel, facilities, materials, equipment, and budget.
3. Analysis of process operation, including (1) specific descriptions of process activities over a designated operational period, (2) the frequency and intensity of participation by specifically identified clientele, (3) the basic situational conditions under which the process was conducted, and (4) estimates of operational efficiency with respect to time, cost, organization, etc.
4. Analysis of process dynamics based on the reactions of process participants and observers, including feedback from pupils, staff, teachers, administrators, and parents.

EXPECTED OUTPUTS (Decisions specific to process organization and operation)

1. Description of congruence of process carried out with the stated pre-process objectives and strategy plans - was the process implemented as proposed?
2. Conclusions with respect to the basic professional and administrative feasibility of the process - was it practical within the limits of resources and the situational conditions provided?
3. Conclusions with respect to the potential of the process for generalization to other situations and populations.
4. Recommendations for modifications based on feedback from the implementation experience, including indicated changes in process objectives, process strategies, resources, or procedures.
5. Descriptions and data for the final evaluation reports.

STEP IX - FROM OUTCOME EVALUATION TO PROCESS CONCLUSIONS AND DECISIONS

NEEDED INPUTS (Outcome evaluation information)	EXPECTED OUTPUTS (Decisions specific to process effectiveness)
1. Outcome results for each outcome objective. (STEPS II and III.)	1. Conclusions with respect to the relative effectiveness of each process strategy, or combinations of strategies, in achieving the stated developmental and performance objectives.
2. Differential analysis of outcome results with respect to pupil, situational, and process variables.	2. Conclusions with respect to the differential effectiveness of the process - were there outcome differences that could be associated with differences among pupils and situations, or process variations?
3. Analysis of observed relationships between instrumental outcomes (performance), developmental outcomes, and goals.	3. Estimates of cost effectiveness in producing observed outcomes.
4. Analysis of observed outcomes that were not anticipated in the apriori developmental and/or performance objectives.	4. Formulation of probability statements in terms of the probability that a specified outcome can be achieved among identified pupil groups when a given process strategy is employed in a similar situational context.
	5. Identification of pupil outcomes that could be attributed to the process (positive or negative), but were not hypothesized in the objectives.

STEP X - FROM EVALUATION CONCLUSIONS TO PROGRAMMATIC DECISIONS

NEEDED INPUTS (Process and outcome evaluation information)	EXPECTED OUTPUTS (Decisions for program modification, maintenance or elimination)
1. Process evaluation conclusions. (STEP VIII)	1. Estimates of the validity of the developmental theories used to formulate goals and objectives.
2. Outcome evaluation conclusions. (STEP IX)	2. Determination of the appropriateness of the stated goals and objectives for the target population, for the educational enterprise in general, and for the PPS specifically.
3. Evidence of relationships between the process and the observed outcomes - may be either cause and effect type relationships, or association type relationships.	3. Determination of the appropriateness of the program (combination of strategies) for achieving goals and objectives stated for the target population and the situation.
4. Inferences regarding the contributions of the process to the satisfaction of stated needs, and the achievement of apriori goals and objectives.	4. Generation of new hypotheses regarding the process-outcome relationships.
5. Evidence of process feasibility for specified target populations, the educational and community situation, and the current and potentially available resources.	5. Recommendations for revisions of goal statements and objectives.
6. Professional judgment.	6. Recommendations for program modifications, continuation, or elimination.
	7. Communication of results to the field.

Summary

A systems model for the development and evaluation of PPS programs has been presented and outlined in procedural steps. The purpose of the model is to facilitate the systematic planning, implementation, and evaluation of PPS. The variables and steps included in the model were outlined to help the reader become aware of the program development process and of suggestive context categories for consideration. The model, however, is only a guide and specific considerations will be dictated by local program and situational conditions. Also, several of the steps in the model may have already been completed in some programs, in which case the program staff can proceed to the next appropriate step. In other words, this model is very flexible and should be adaptable to practically any program structure or local situation.

The model has been translated (see Part II of this guide) into implementation procedures and suggestions to enable the user to develop and evaluate PPS with minimum necessity to seek outside assistance or materials. The entire developmental and evaluative process is organized in the following section around the four components of (1) defining, (2) structuring, (3) implementing, and (4) validating.

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Chapter 3

A Taxonomy of Pupil Personnel Objectives

A Guide for the Specification of Outcome Criteria

Introduction

The specification of appropriate, adequate, and manageable outcome criteria is essential for the meaningful evaluation of pupil personnel services (PPS). The goals and objectives of any particular PPS program either directly, or indirectly, reflect (1) the assumed or observed needs of the target group; (2) the philosophical and process priorities of the institution; (3) the estimated resources available; and (4) the values of professional personnel, administrators, constituents (parents and community), and in some cases the pupils. The primary purpose of the taxonomy presented in this chapter is to suggest a systematic approach to the development of PPS goals and objectives that will:

1. provide a sound psycho-social basis for the PPS program;
2. be applicable to the developmental and adjustment needs of large aggregates of pupils;
3. be adaptable to the wide range of pupil maturity from kindergarten through grade twelve;
4. serve as the basis for assessing the reduction of individual behavioral deficits;
5. permit the translation of global goals into related outcomes that are measurable; and
6. facilitate the implementation of the systems model for program development and evaluation (see Chapter 2).

The original work on the development of a taxonomy of guidance objectives was reported in the Contractor's Report, Phase I, National Study of Guidance (Wellman, 1968). The conceptual framework and taxonomy presented in that report provided the impetus for the development of objectives for the evaluation of a wide variety of PPS and career education programs in a number of States. The experience in using the original taxonomy supported the value of a systematic approach to the development of meaningful and manageable PPS objectives.

However, the broader goals and developmental objectives for secondary school students, used as examples in the taxonomy, were not sufficiently explicit to enable all groups to derive (1) measurable objectives and outcomes, and (2) objectives appropriate for pupils in the elementary school grades. The taxonomy presented below is an attempt to reduce these difficulties in the development of objectives that are useful for evaluation.

Rationale

The rationale for the taxonomic structure of developmental PPS goals and objectives was predicated upon a series of assumptions regarding PPS and pupil development and adjustment. These assumptions are based upon research findings, theoretical formulations, and experience with the development of objectives that can be used for the evaluation of program effectiveness.

1. Individual development is a process of continuous (but not necessarily uninterrupted, or uniform) and sequential progress toward increased effectiveness in the management and mastery of the environment for the satisfaction of psychological and social needs. This assumption provides the basis for structuring objectives that state expectations of sequential development of purposive behavior - purposive in terms of satisfying the internal psychological needs of the individual, and in coping with the social demands of the environment.

2. The stage, or level, of the individual's development at any given point in time is related to the nature and accuracy of his perceptions; the level and complexity of his conceptualizations; and, the subsequent developmental rate and direction. Objectives should, therefore, be formulated to be meaningful for the developmental status of the target group or individual. No individual in the educational setting is at a zero point in development, hence change must be measured from some relative point rather than an absolute.

3. Positive developmental changes are potential steps toward the achievement of higher level purposive goals. This interlocking relationship dictates that the achievement of each objective be viewed as a means to further development rather than as an end result.

4. Environmental or situational variables provide the external dimension of individual development.

Knowledge, understanding, skills, attitudes, values, and aspirations are the product of the interaction of these external variables with the internal variables which characterize the individual. Therefore, PPS objectives and outcomes are meaningful to the extent that they are related to the external world as the individual perceives it and as members of his cultural group perceive it.

5. Criterion models for the derivation of developmental goals and objectives can be conceptualized from theoretical formulations of development, such as career development or social development theories. Objectives derived from such models should be based upon the commonality of development and behavior among individuals, while at the same time respecting the uniqueness of each individual.

6. The cognitive and affective development of the individual are inseparable within the framework for deriving PPS objectives and outcomes. The cognitive process, in reality, is at the core of PPS intervention and the measurement of outcomes. Cognitive communication and mediation is central to the PPS process and to the observations made to estimate developmental status or change. It is thus postulated that the influence of affect and the level of affective development are estimated from inferences supported by individual responses (both overt and covert) that are cognitively observed and interpreted. The assumption of inseparability recognizes that the individual's affective state is fundamental to his level and nature of development, but that it is accessable to PPS intervention and outcome estimates primarily through the cognitive process. The cybernetic capability of the individual to control his behavior would appear to be dependent upon both affective and cognitive inputs, interpretations, and evaluations.

7. The developmental process moves from the lowest level of awareness and differentiation (perceptualization), to the second level of conceptualizing relationships and meanings (conceptualization), to the highest level of behavioral consistency and effectiveness by both internal (self) and external (social) evaluation (generalization).

8. The areas of individual development and adjustment of primary concern to the PPS function in schools can be classified as educational, vocational, and social. These classifications represent the broad environmental categories relevant to the development and

adjustment of each individual, and are identified as the domains of PPS objectives and outcomes.

9. PPS objectives should be pupil centered with emphasis upon pupil change rather than upon process achievements. Positive pupil change within developmental levels and domains, thus becomes the fundamental structure for the formulation of PPS objectives and outcomes.

10. PPS, as a function of education, has many objectives that are common with those of education in general. Also, the PPS program is only one part of the pupil's environment that may contribute to the achievement of developmental objectives. The PPS objectives should reflect those areas of pupil development or adjustment that are consistent with the primary purposes of the services. These primary purposes can be identified in most school systems by delineating those areas where there is a systematic and organized PPS effort, as opposed to the more loosely defined efforts of other educational functionaries in the achievement of objectives.

These ten assumptions and the interpretations presented above served as guidelines for the development of the taxonomic structure for classifying PPS objectives by developmental levels and domains.

Dimensions of the Taxonomy

The major content areas of PPS objectives are classified in the educational domain, the vocational domain, and the social domain. This dimension divides the objectives by the major developmental areas only, and has no hierarchical ordering for the three domains. That is, no sequential order of development is suggested from one domain to another, but rather that concurrent development in each area may, and usually does, occur.

A hierarchical ordering of objectives within each of the content domains is suggested in the level of development dimension. Level of development is conceptualized as a sequential continuum in which behavior change moves from an initial awareness to the point of behavior integration. Three major levels or categories are designated for the development and classification of PPS objectives. This sequential classification permits the specification of short range (perceptualization), intermediate range (conceptualization), and long range (generalization) objectives of the PPS program. The designations for the major categories within the three developmental levels are shown in the following outline.

Major Categories of PPS Objectives

1.0 Perceptualization Objectives - The development of awareness and differentiations of relevant environmental and self variables.

  1.1 Environmental Orientation - The acquisition of knowledge and understanding of educational, vocational, and social opportunities, requirements, and expectations. (Career awareness, social awareness, etc.)

  1.2 Self Orientation - The acquisition of knowledge and understandings of abilities, limitations, identities, feelings, and motivations relevant to educational, vocational, and social development. (Self awareness, awareness of the uniqueness of individuals, etc.)

2.0 Conceptualization Objectives - The development of personal meanings of self and environmental perceptions by analyzing relationships, making predictions, evaluating consequences, and taking actions relevant to the educational, vocational, and social development of the individual.

  2.1 Directional Tendencies - The formulation of decisions and plans, and the development of interests and value attachments which result in increasing stability and consistency in purposeful movement toward educational, vocational and social growth. (Decision making, value clarification, action in the pursuit of goals, etc.)

  2.2 Adaptive and Adjustive Behavior - The development of coping behavior to meet the educational, vocational, and social requirements and expectations of the individual's environment. (Acquisition of adaptive behaviors and the removal of maladaptive behaviors, environmental management, etc.)

3.0 Generalization Objectives - The development and internalization of a behavior and value pattern typified by consistency, commitment, effectiveness, and autonomy.

  3.1 Accommodation - The manifestation of psycho-social ability to cope with cultural and environmental demands. (Cultural and social acceptance and integration)

  3.2 Satisfaction - The internal self valuing of environmental transactions. (Consistency between internal conceptualizations of self and the experiencing self)

3.3 Mastery - The movement toward self actualization in terms of congruency between expectations (personal and external) and outcomes (assessed by self and social criteria). (Commitment and action consistent with developmental potential)

Explanation of Major Developmental Categories of Objectives

1.0 Perceptualization Level

Objectives at this level emphasize the acquisition of knowledge and skills, and attention to selected aspects of environment and self. The knowledge and skills most relevant to PPS are those needed by the individual in making appropriate educational, vocational, and social growth and decisions, and in coping with the demands of the school and social environment. Attention is the first step toward the development and maturation of interests, attitudes, and values. Outcomes at the perceptualization level should reflect accuracy of perceptions, ability to differentiate, and elemental skills in performing functions appropriate to the individual's level of educational, vocational and social development. Objectives at this level are classified under two major categories, 1.1 Environmental Orientation and 1.2 Self Orientation.

Objectives classified as 1.1 Environmental Orientation emphasize the individual's awareness and acquisition of knowledge and skills needed to make educational, vocational and social growth and decisions, and to cope with the demands of the educational, vocational, and social environment. The objectives at this level are essentially cognitive in nature and have not necessarily been internalized to the extent that the individual attaches personal meaning to the acquired knowledge and skills. For example, an individual may acquire appropriate study skills and knowledge but it does not necessarily follow that he will utilize these skills and knowledge in his study behavior. However such knowledge and skills are considered to be prerequisites to behavior requiring them. Thus, the acquisition of knowledge and skills required to make growth oriented decisions and to cope with environmental expectations is viewed as the first step in the educational, vocational and social development of the individual regardless of whether subsequent implementation emerges. A primary and universally applicable goal of PPS is the development of knowledge and skills to enable the individual (1) to understand and to meet the expectations of his school and social environment, and (2) to recognize the values underlying social limits.

Objectives classified as 1.2 Self Orientation focus upon the development of accurate self perceptions. One aspect of an accurate awareness of self is the knowledge of abilities, aptitudes, interests, and values which characterize the individual. An integral part of self identity is the pupil's ability to understand and accept the ways that he is alike and different from other individuals. Attention to the educational, vocational, and social decisions and demands relevant to immediate adjustment and future development is considered a prerequisite to an understanding of the relationships between self and environment. An awareness, and perhaps an understanding, of feelings and motivations is closely associated with self-evaluation of behavior, with the formation of attitudes and values, and with voluntary, rationally based, modification of behavior. The goal of PPS at this level then is to help the individual make a more accurate assessment of self so that he can realistically relate to his environment in his decisions and actions. The PPS concern is with the development of self awareness and differentiation that will enable appropriate decision-making and coping behavior in the educational, vocational, and social environment.

2.0 Conceptualization Level

PPS objectives at the conceptualization level emphasize action based upon the relationships between perceptions of self and perceptions of environment. The types of action sought are categorized into personally meaningful (1) growth decisions,and (2) adaptive and adjustive behavior. The general goal, at this level of development, is that each individual will (1) make appropriate choices, decisions, and plans that will move him toward personally satisfying and socially acceptable development; (2) take the action necessary to progress within developmental plans; and (3) develop behavior to cope with his school and social environment as judged by peers, teachers, and parents. The two major classifications of conceptualization objectives are 2.1 Directional Tendencies, and 2.2 Adaptive and Adjustive Behavior.

The 2.1 Directional Tendencies relate to movement of the individual toward socially desirable goals, that are consistent with potential for development. These objectives are indicators of directional tendencies as reflected in the choices, decisions, and plans which the individual is expected to make in ordering the course of his educational, vocational, and social growth. The acquisition of knowledge and skills covered by objectives at the 1.0 perceptual level is deemed a prerequisite to the pursuit of objectives in this category, although the need to make choices and decisions may provide the initial stimulus to consider the perceptual objectives. For example, a ninth grade pupil may be required to make curricular choices which have a bearing upon post high school education and general vocational aspirations. The need to make an immediate choice at this point may stimulate an examination of both environmental and self perceptions, and a careful analysis of the relationships between the two. To this extent then, the interrelationship and interdependence of the perceptual and conceptual objectives precludes the establishment of mutually exclusive categories. Furthermore, the concept of a developmental sequence suggests this type of interrelationship. Any educational, vocational, or social choice which may determine the direction of future development is considered to represent a directional tendency on the part of the individual, and objectives related to such choices are so classified.

The expected emergence of increasingly stable interests and the strengthening and clarification of value patterns constitute additional indicators of directional tendencies. Persistent attention to particular persons, activities or objects in the environment, to the exclusion of others (selective attention), is an indication of the development of interests through an evaluation of the relationships of self to differentiated aspects of the environment. Objectives that relate to value conceptualization, or the internalization of social values, complement interest development. Here the individual is expected to show increased consistency in giving priority to particular behavior which is valued personally and socially. In a sense, the maturation of interests represents the development of educational and vocational individuality, while the formation of value patterns represents the recognition of social values and the normative tolerances of behavior. Objectives of PPS in these sub-categories include consistency in the expression of interests and values, and the manifestation of behavior compatible with the emerging interest and value patterns. For example, the high school pupil might be expected to manifest increasing and persistent interests (measured or expressed) in particular persons, activities, and objects. He would be expected to develop a concept of self consistent with these interests, and to place increasing importance, or value, on behaviors, such as educational achievement, which will lead to the development of related knowledges and skills, and to the ultimate achievement of vocational aspirations. The directional tendency emphasis is upon achieving increased consistency and strength of interests and values over a period of time. The incidental or occasional manifestation of an immediate interest or value with little or no long range impact upon the behavior of the individual should not be interpreted as an indication of a directional tendency.

The second major category of objectives at the conceptualization level includes those related to the application of self-environment concepts in coping with environmental presses and in the solution of problems arising from the interaction of the individual with his environment. PPS objectives covering this area of functioning are designated as *2.2 Adaptive and Adjustive Behavior*.

Adaptive Behavior refers to the ability and skill of the individual in the *management of his school and social environment* (within normative tolerances) to satisfy self needs, to meet environmental demands, and to solve problems. There are two major types of adaptive behavior relative to PPS goals. *First*, the individual may, within certain prescribed limits, control his environmental transactions by *selection*. For example, if he lacks the appropriate social skills he may avoid social transactions which demand dancing, and choose those where his existing abilities will gain the acceptance of the social group. *Second*, the individual may be able to *modify the environment* to meet his needs and certain external demands. For example, the pupil who finds sharing a room with a younger sibling disruptive to studying at home, may be able to modify this situation by arranging a study schedule that will be more suitable to do his work.

Adjustive Behavior refers to the ability and flexibility of the individual in *modifying his behavior* to meet environmental demands, and to solve problems. Such behavior modification may include the development of new abilities or skills, a change of attitudes, or a change in method of operation or approach to the demand situation. In the examples of adaptive behavior the pupil might use adjustive behavior by learning to dance rather than avoiding this demand situation; and he might develop new study skills and behaviors to meet the environmental demands of study tasks.

The basic PPS objectives in this area is that the individual be able to demonstrate *adaptive and adjustive behavior* in coping with school and social demands, and in solving problems which restrict his ability to meet such demands. The objective may be achieved by the application of existing abilities or by learning new ways of coping with the demands. Regardless of how a particular individual achieves the objective, and whether adaptive or adjustive behavior or both are utilized, may be relatively unimportant to the overall consideration. The basic evaluative question is whether whose who experience particular PPS processes achieve adequate coping behavior in greater numbers than those who do not.

3.0 Generalization Level

Objectives at the generalization level imply a high level of functioning which enables the individual to (1) accommodate environmental and cultural demands, (2) achieve personal satisfaction from environmental transactions, and (3) demonstrates competence through mastery of specific tasks and through the generalization of learned behavior, attitudes and values to new situations. Behavior which characterizes the achievement of generalization level objectives may be described as purposeful and effective by self or intrinsic standards and by societal or extrinsic criteria. The individual should demonstrate behavioral consistency, commitment to purpose, and autonomy in meeting educational, vocational and social demands. This, then, is the kind of person who is relatively independent and predictable. The PPS objectives at this level are classified as 3.1 Accommodation, 3.2 Satisfaction, and 3.3 Mastery. The concept of sequential and positive progress implies a continuous process of internalization, including applicational transfer of behavior and a dynamic, rather than a static, condition in the achievement of goals. Thus the achievement of generalization objectives may be interpreted as positive movement (at each level of development) toward the ideal model of the effective man (self and socially derived) without assuming that any given individual will ever fully achieve the ideal. Objectives structured for evaluation purposes, to be consistent with this concept, are intended to reflect behavior indicative of positive movement, appropriate to the individual's developmental status, toward the ideal and do not represent a final end result or outcome.

The 3.1 Accommodation objectives relate to consistent and enduring ability to solve problems and to cope with environmental demands with minimum conflict. Accommodation of the cultural and environmental demands requires that the individual make decisions and take action within established behavioral tolerances. The applicational transfer of adaptive and adjustive behavior, learned in other situations and under other circumstances, to new demand situations is inferred by the nature of the objectives classified in this category. The achievement of accommodation objectives can probably best be evaluated by the absence of, or the reduction of, unsatisfactory coping behavior. The wide range of acceptable behavior in many situations suggests that the individual who performs within that range has achieved the accommodation objectives for a particular demand situation, while if he is outside that range he has not achieved these objectives. For example, the pupil is expected to attend class, to turn in class assignments, and to respect the property rights of others. If there is no record of excessive absences, failure to meet teacher assignment schedules, or violation of property rights, it may be assumed that he is accommodating these demands within normative tolerances. In a sense, the objectives in this category represent the goal that individual behavior conform to certain limits of societal expectancy, while the other categories of generalization objectives tend to be more self-oriented. The achievement of 3.1 accommodation objectives may provide evidence or inferences regarding the congruence of individual values with the values of his culture. Caution should be exercised in drawing such inferences, however, because the individual may demonstrate relative harmony externally but have serious value conflicts which do not emerge in observable behavior.

The 3.2 Satisfaction objectives reflect the internal interpretation which the individual gives to his environmental transactions. His interests and values serve as the criteria for evaluating the decisions made and the actions taken within the educational, vocational, and social domains. Although, the evaluations of parents, peers, and "authority figures" may influence the individual's interpretation (satisfaction) these objectives become genuine only as they are achieved in congruence with the motivations and feelings of the individual. The description of satisfaction objectives consistent with the PPS function should include the internal (individual's) evaluation of educational, vocational, and social affiliations, transactions, and adjustments in terms of personal adequacy, expectations, and congruency with his perceived ideal life style. Expressed satisfaction, as well as behavioral manifestations from which satisfaction may be inferred, such as persistence, would seem to be appropriate criterion measures. Also, congruency between measured interests and voluntarily chosen educational, vocational, and social activities should be considered.

The 3.3 Mastery objectives include the more global aspects of achievement and generalization of attitudinal and behavioral modes. Longer range goals encompassing larger areas of achievement are emphasized here rather than the numerous short range achievements than may be required to reach the larger goal. For example, the young child becomes aware of task demands and different ways to meet them (perceptualization). At the conceptualization level task oriented behaviors are developed and made meaningful to him as an individual. Generalization (mastery) objectives should reflect the internalization of these behaviors so that tasks are approached and achieved to the satisfaction of self and social expectations. In the social area, objectives relate to the social responsibility, and contributions of the individual with respect to social affiliations and interactions appropriate to his developmental status. All of the objectives in this category are framed in the context of self and social estimates of potential for achievement. Therefore, criteria for the estimation of achievement of the 3.3 Mastery objectives should be in terms of congruency between independent behavioral action and expectations for action as derived from self and social sources. For example, a mastery objective in the educational area might be achieved by high school graduation by one individual, while graduate work at the university level might be the expected achievement level for another individual.

The taxonomic schema for the derivation of PPS outcome objectives within the two dimensions of developmental level and developmental domain is shown in figure 6.

Examples of PPS Outcome Objectives

The goals, developmental objectives, and performance objectives presented below are examples of how goals can be reduced to measurable outcomes at the different grade levels from K through twelve. These objectives were formulated to satisfy Steps II, III, and IV of the evaluation model (see Figure 5), and to illustrate the use of the taxonomic classifications to assure the systematic ordering of objectives within developmental levels and domains. Any given pupil need may serve as the point of departure for the generation of one or more goals, which in turn serve as the basis for the generation of developmental objectives, that are subsequently defined operationally by the specification of performance objectives. The progression from a general need to the formulation of a number of performance objectives is illustrated in Figure 7.

Although many of the objectives stated in the taxonomy have been used in PPS evaluation, they are presented only as examples and should in no sense be considered as a comprehensive list or model of PPS objectives to be adopted by local programs. Objectives for a local PPS program should be tailored to the uniqueness of the target populations and the situation. The goals and developmental objectives of the taxonomy may be quite similar across a variety of target groups and situations, but the specific performance objectives or outcome expectancies will invariably differ from group to group, even within the same school. The primary purpose of these examples is to illustrate the taxonomic ordering of objectives, and to help the practitioner visualize the procedure of reducing goals to manageable objectives.

Levels / Domains	Educational *	Vocational *	Social *
Level I 1.0 Perceptualization-Awareness and differentiation 1.1 Environmental Orientation 1.2 Self Orientation	Knowing: *physical setting *academic programs *institutional procedures *rules of conduct Aware of: *abilities, aptitudes and interests *educational motivations	Knowing: *meaning of work to people *how skills and training relate to occupations *why people choose different careers *how present decisions affect future careers *personal career interests and aptitudes	Aware of: *characteristics that differentiate people *acts of social responsibility *interdependence of people *self feelings and perceptions towards others
Level II 2.0 Conceptualization-Personal interpretations of self in environment 2.1 Directional Tendencies *interests *attitudes *values *decisions *plans 2.2 Adaptive and Adjustive Behaviors *coping behaviors *environmental management *behavior modification	Developing decision-making skills through: *recognition of choice points *identification of options *estimation of choice consequences *application of values *exercising choices *formulating plans Behavioral development (or adjustment) to: *school routine *study tasks *academic expectations	Formulating Career Decisions: *evaluating options *predicting consequences *assessing personal meaning of career *reality testing of priority options *making tentative choices and plans Behavioral development (or adjustment) in: *career preparation progress *pursuit of career plans *work efficiency	Valuing: *social affiliation and participation *social order *feelings of others *those who differ Behavioral development (or adjustment) in: *social identity and contributions *communication skills *social responsibility *social cooperation
Level III 3.0 Generalization-consistent behavioral applications 3.1 Accommodation 3.2 Satisfaction 3.3 Mastery	Consistent and enduring behavior in: *coping with educational expectations *valuing educational experiences *educational achievement *persistence in education	Consistent and enduring behavior in: *commitment to career choice *satisfaction with progress toward career goal *satisfactory achievement in career preparation (or in a career)	Consistent and enduring behavior in: *showing respect for others *contributing to social order and action *valuing social participation *exercising social skills *concern for safety and welfare of others

Figure 6 . Taxonomic Schema for the Derivation of PPS Outcome Objectives

* Outline of examples of possible goals within each domain.

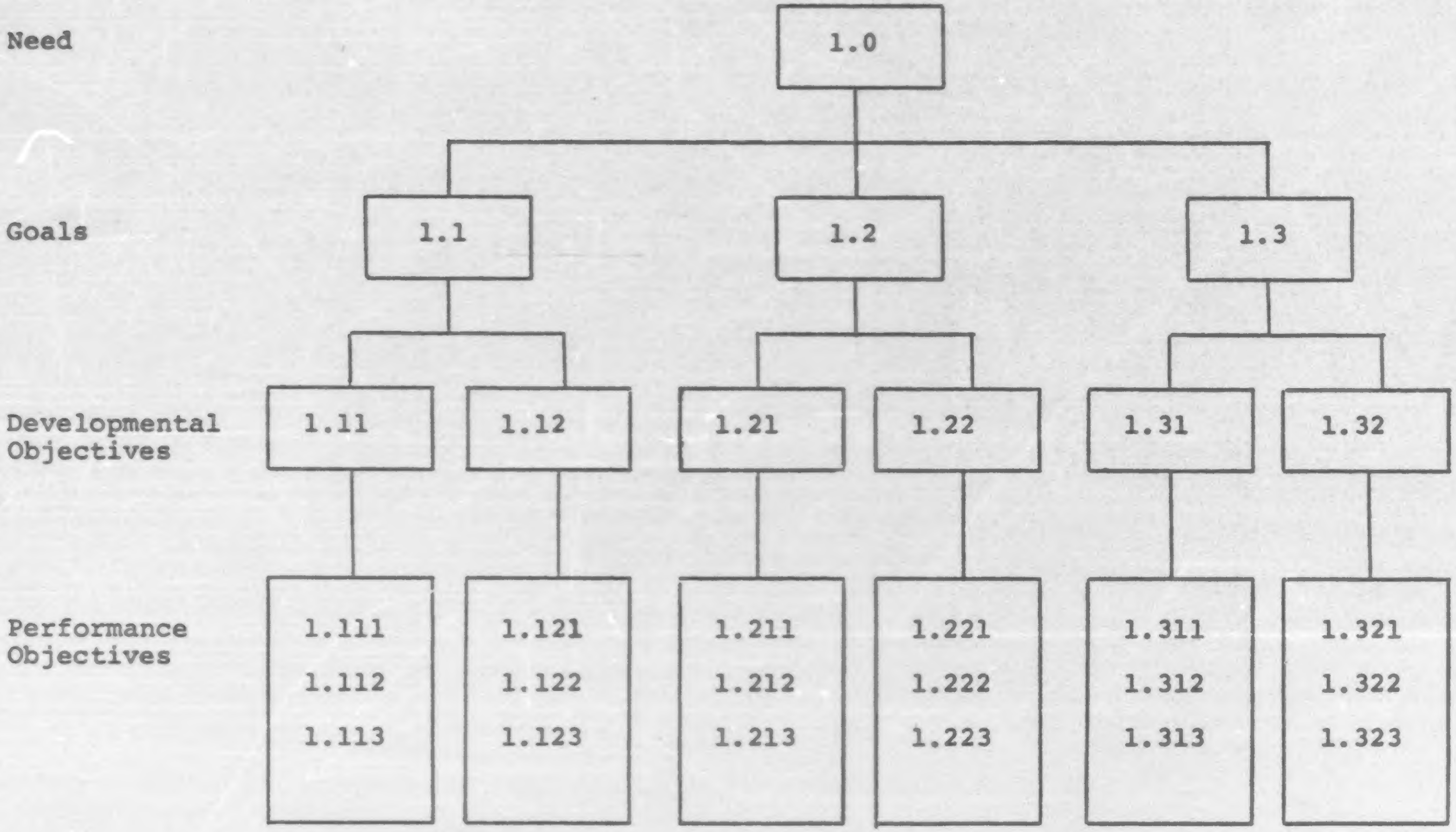
Need
1.0
Goals
1.1
1.2
1.3
Developmental Objectives
1.11
1.12
1.21
1.22
1.31
1.32
Performance Objectives
1.111
1.112
1.113
1.121
1.122
1.123
1.211
1.212
1.213
1.221
1.222
1.223
1.311
1.312
1.313
1.321
1.322
1.323

Figure 7. Sequence of Objectives Development from Needs and Goals

PPS Goals and Objectives

Educational Domain

1.0 Perceptualization Level

1.1 Goal: Educational Environment Orientation. The goal is for the individual to become thoroughly familiar with the educational setting, resources, and procedures. The basic environmental references relevant to educational development, and the PPS, include the school's physical setting, academic programs, extra-curricular activities, operating procedures, and rules of conduct. The emphasis is upon knowledge, and the ability to differentiate situations, appropriate to the individual's grade level and attendance unit.

1.11 Developmental Objective: The individual will develop a functional awareness of the school setting.

1.111 Performance Objectives: The individual will be able to

K-3: locate without supervision, his classroom, the restroom, the nurse's office, and the principal's office.

4-6: locate and explain the function of key offices and materials in the school, e.g. nurse, counselor, library, classroom activity materials, etc.

7-9: locate and explain the functions of key personnel and resources in the school, e.g. nurse, counselor, principal, librarian, books, journals, special career materials, etc.

10-12: locate and explain the functions of key personnel and resources, and organizational units in the school, and the school system, e.g. academic departments and resources, counseling and placement personnel and facilities, extra-curricular facilities, library source materials, etc.

1.12 Developmental Objective: The individual will develop a functional awareness of the educational opportunities open to him.

1.121 Performance Objectives: The individual will be able to

K-3: match content descriptions with labels of basic areas of activity in his school program, e.g. reading, arithmetic, art, music, etc.

4-6: relate basic studies in school to areas of occupational skills.

7-9: relate levels of education and curricular specializations to levels and families of occupations.

10-12: relate curricular specializations to subsequent educational preparation and life career plans.

1.2 Goal: Educational Self Orientation. The goal is for the individual to develop an accurate perception of self in educational experiences. The emphasis is on self-understanding of abilities, personal limits, and motivations related to the educational setting, purposes, and activities. These understandings should lead to increased personal meaning of the concept of education, as manifest by self identity with the school in general, and with the purposes and activities of education as one aspect of personal growth.

1.21 Developmental Objective: The individual will develop a functional awareness of the ways in which people are alike and different, and of the primary indicators of individual aptitudes, abilities, interests, and limits.

1.211 Performance Objectives: The individual will be able to

K-3: describe himself and how he is alike, or different from, his classmates in terms of general physical, social, and performance characteristics, e.g. height, friendliness, ability to read, etc.

4-6: describe those things he likes and dislikes, does well and does poorly, and how these characteristics influence his educational activities, e.g. singing, running, study habits, etc.

7-9: match areas of his abilities and interests with specific curricular and extra-curricular areas of activities.

10-12: describe, accept, and respect his own uniqueness, in terms of abilities, limits, and values.

2.0 Conceptualization Level

2.1 Goal: Educational Directional Tendencies. The goal is for the individual to synthesize knowledge and understandings of self and educational environment into a rational and personally meaningful order. Progress toward a more clearly defined conceptualization of self in the educational situation should enable the individual to make appropriate decisions, to formulate plans, and to acquire value patterns that will make his educational experiences personally meaningful and self enhancing.

2.11 Developmental Objective: The individual will show an increasing tendency to value education as an influence in his life activities and decisions.

2.111 Performance Objectives: The individual will be able to

K-3: describe those things that he has learned to do in school, e.g. games, count, read, etc.

4-6: explain how what he has learned enables him to learn new things.

7-9: show how specific knowledge and skills relate to occupational pursuits.

10-12: explain how learning, in and out of school, is a continuous process that affects life styles.

2.12 Developmental Objective: The individual will develop decision-making skills in increasingly complex situations.

2.121 Performance Objectives: The individual will be able to

K-3: name decisions that he, and his parents and teacher, make that affect his daily life.

4-6: indicate optional courses of action in a variety of choice situations, and specify reasons for giving priority to particular options.

7-9: describe the educational options, available to him, and estimate the probable general consequences of each option (in terms of interests, abilities, and life goals).

10-12: formulate educational plans consistent with his aptitudes and interests, and based upon a rational analysis of available options and estimated consequences of each option.

2.2 Goal: Adaptive and Adjustive Educational Behaviors. The goal is for the individual to develop behaviors that will enhance adjustment and progress in the pursuit of self and socially derived educational goals. These behaviors emphasize harmonious and effective coping in the educational situation. The individual may develop new ways to manage his environmental situation (adaptive), or he may remove behavioral deficits through the acquisition of new behaviors or the modification of old behaviors (adjustive). The development of these behaviors should enable the individual to meet changing educational demands and to achieve at a level consistent with his ability.

2.21 Developmental Objective: The individual will develop personal skills and attitudes conducive to achievement and adjustment in the school setting.

2.211 Performance Objectives: The individual will be able to

K-3: give sustained attention to teacher supervised school tasks.

4-6: follow instructions and complete school assignments with a minimum of supervision.

7-9: demonstrate study skills in assignments requiring independent organization of time and resources.

10-12: develop, and carry to satsifactory conclusion, projects that require independent study and initiative in locating and organizing source materials.

3.0 Generalization Level

3.1 Goal: Educational Accommodation. The goal is for the individual to demonstrate consistency in coping constructively with the demands of the educational environment. Educational accommodation includes the application of effort in meeting academic demands, and functioning harmoniously within the institutional elements of the school. The emphasis is upon the application of appropriate adaptive and adjustive behaviors, and effective compromise in value situations, rather than individual acquiescence in dealing with environmental conflicts.

3.11 Developmental Objective: The individual will take personal responsibility in meeting the demands of his school situation.

3.111 Performance Objectives: The individual will be able to

K-3: participate actively and responsibly in school tasks.

4-6: carry out established classroom, building, and playground responsibilities without prompting or close supervision.

7-9: demonstrate compliance with established school procedures, such as time schedules and school attendance; and, to show personal responsibility for completing agreed upon tasks, such as part of a group project.

10-12: exercise judgment, based upon established principles, and procedures, in choosing appropriate responses to personal conduct conflict situations.

3.2 Goal: Educational Satisfaction. The goal is for the individual to interpret his educational experiences as meaningful and satisfying. The essence of the goal is the valuing of educational involvement as a personal growth experience, both from the standpoint of current satisfaction and as progress toward life goals. Valuing of this type may be associated with the individual's perception of success or the anticipation of success. Developmentally the valuing process can be conceptualized as moving from the daily reinforcement value of early educational experiences to the more comprehensive and abstract concept of education as an internalized life value as the individual matures educationally.

3.21 Developmental Objective: The individual will attain personal satisfaction from educational experiences and will increasingly value education as an important part of his life.

3.211 Performance Objectives: The individual will be able to

K-3: show interest and enthusiasm in classroom activities.

4-6: identify personally with school activities and projects, and to express satisfaction in school experiences.

7-9: show ways in which education is important to him in reaching his life goals, and how his current education activities are important to his subsequent educational plans.

10-12: place high priority on educational achievements and to formulate educational plans that lead to life goals consistent with his interests and abilities.

3.3 Goal: Educational Mastery. The goal is for the individual to strive for and achieve mastery of educational tasks and programs consistent with his level of ability and maturity. Also, inherent in this goal is the ability to apply learned knowledge, skills, and concepts to new situations, both in and out of school.

3.31 Developmental Objective: The individual will progress in educational development consistent with expectancy for achievement.

3.311 Performance Objectives: The individual will be able to

K-3: demonstrate basic educational skills achievement consistent with his level of intellectual maturity.

4-6: complete satisfactorily those courses expected of pupils at his level of educational development.

7-9: complete satisfactorily the curriculum that is preparatory for high school studies that are consistent with his abilities and interests.

10-12: complete his chosen high school curriculum, and to pursue further educational development (in or out of school) consistent with his abilities, past achievement, and interests.

3.32 Developmental Objective: The individual will make appropriate application of learned knowledge, skills, and concepts to life situations.

3.321 Performance Objectives: The individual will be able to

K-3: to use acquired verbal skills to relate to peers and family.

4-6: to use reading skills in independent leisure reading.

7-9: apply special abilities and skills, such as music, art, and mechanics, to extra-curricular activities and non-school activities.

10-12: apply a rational and analytical attitude to the solution of problems and to cope with new situations.

Vocational Domain

1.0 Perceptualization Level

1.1 Goal: Vocational Environment Orientation. The goal is for the individual to develop an awareness and understanding of the nature, and variety of the world of work, including the differentiated meanings of work for different people. This goal includes the acquisition of knowledge regarding the occupational structure, mobility patterns, rewards, and demands, as well as the perceptual development of life styles associated with the differentiated occupational levels and clusters.

1.11 Developmental Objective: The individual will develop an understanding of the ways occupations can be described and differentiated.

1.111 Performance Objectives: The individual will be able to

K-3: name a wide variety of occupations in the world of work.

4-6: identify characteristics which differentiate occupations.

7-9: identify the various methods of classifying occupations.

10-12: explain why occupations may be classified in various ways.

1.12 Developmental Objective: The individual will develop an understanding of the interrelationships among occupations, and the relationships between occupations and the needs of society.

1.121 Performance Objectives: The individual will be able to

K-3: identify occupations that are dependent upon other occupations.

4-6: explain the interlocking of occupations within one occupational cluster or family.

7-9: explain how the work done in specific jobs is dependent upon and contributes to the work done in other jobs.

10-12: show how competence in specific occupations may lead to employment in more advanced occupations, both within and between occupational clusters.

1.122 Performance Objectives: The individual will be able to

K-3: name occupations that serve people in his community.

4-6: explain the need for job specialization within the world of work.

7-9: explain why there is an interdependence between occupations and the needs and goals of society.

10-12: describe how the needs and functions of society are satisfied by a variety of occupations.

1.13 Developmental Objective: The individual will develop an understanding of the relationships between the characteristics of occupations and the life styles of people working in those occupations.

1.131 Performance Objectives: The individual will be able to

K-3: describe in general terms the life conditions of persons known to him, e.g. where they live, when they work, what they do when not working, etc.

4-6: associate differences in life style with employment in different types and levels of occupations.

7-9: explain how occupational choice influences future life style.

10-12: describe in detail how the training, work, and social roles of an occupation relate to conditions of living and to career life styles.

1.14 Developmental Objective: The individual will develop an understanding of the demands for entrance into, and progression in, different careers.

1.141 Performance Objectives: The individual will be able to

K-3: describe broad differences in the skills and training required in different occupations.

4-6: identify basic skills and educational requirements needed for broad occupational categories.

7-9: identify general skills and training requirements for a range of occupations that interest him.

10-12: identify specific skills and training requirements for certain occupations he may be considering.

1.2 Goal. Vocational Self Orientation. The goal is for the individual to develop an accurate perception of himself in relation to the "world of work". The goal emphasizes an understanding of abilities, limitations and motivations applicable to occupations. The understandings should enable the individual to begin to identify with an occupational area by perceiving his desired "life style" in relation to an occupational level and area. The achievement of this goal provides a foundation of knowledge for giving personal meaning to vocational options.

1.21 Developmental Objective: The individual will develop an understanding of his abilities, interests, and limitations as they relate to current tasks and to vocational potential.

1.211 Performance Objectives: The individual will be able to

K-3: describe those things he does well and likes to do, and how he may be alike or different from his friends and classmates in this regard.

4-6: identify broad occupational areas that he thinks he would like, and would be able to work in as an adult.

7-9: explain how his abilities and interests are alike or different from those who are in occupational areas that he thinks he might like.

10-12: communicate his feelings and understandings about "life styles" associated with different occupations as compared with his personal attitudes, interests, and abilities.

2.0 Conceptualization Level

2.1 Goal: Vocational Directional Tendencies. The goal is for the individual to develop an accurate concept of self in relation to a career plan. The application of the decision making process, based upon a rational ordering of knowledge and values, is inherent in the achievement of this goal. The increasing ability of the individual to conceptualize himself in the vocational situation may be indicated by more clearly defined identity with vocational related activites. The ultimate achievement of the goal should result in evidence of vocational decisions, plans, and value patterns that are consistent with the individual's interests, abilities, and limits. However, the valuing of a systematic and inquiring approach to assessing the consequences of vocational options may be equally as important as firm decisions and plans.

2.11 Developmental Objective: The individual will develop an understanding of the relationship between present planning and future outcomes.

2.111 Performance Objectives: The individual will be able to

K-3: identify consequences resulting from his decisions.

4-6: describe how previous decisions will affect present and future decisions.

7-9: explain the need to re-examine decisions regarding future long-range career responsibilities.

10-12: describe why he must reconsider goals and formulate new plans as changes occur (self or environmental).

2.12 Developmental Objective: The individual will develop an understanding of how decision making is responsible behavior that affects both his present and future activities.

2.121 Performance Objectives: The individual will be able to

K-3: identify situations in which it is necessary for him to make a choice.

4-6: specify choice options, and estimate the consequences of each option, in a structured choice situation.

7-9: explain how his past experiences, his peers, and his parents may influence the choices he makes.

10-12: explain how his personal values and goals relate to his decisions and plans for the future.

2.13 Developmental Objective: The individual will develop an understanding of the relationship between personal decisions and career goals.

2.131 Performance Objectives: The individual will be able to

K-3: identify personal decisions related to career goals in the occupations of adults,e.g. his parents, teacher, bus driver, etc.

4-6: identify the kinds of decisions that are necessary for people engaged in jobs in his community.

7-9: list the risks and rewards that may be associated with career goals in the major job clusters.

10-12: explain the kinds of compromise in personal decisions needed to achieve career goals.

2.14 Developmental Objective: The individual will develop an understanding of the relationship between his personal attributes (interests, abilities, physical characteristics, etc.) and career decision.

2.141 Performance Objectives: The individual will be able to

K-3: explain why he made specific choices in his daily activities, e.g. games, classroom projects, T.V. shows, use of free time, etc.

4-6: select broad career areas that he thinks he has an interest in and has the type of abilities needed.

7-9: describe his general interests and abilities and relate them to possible career goals.

10-12: explain how one or more career areas relate to his interests and aptitudes.

2.2 Goal: Adaptive and Adjustive Vocational Behaviors. The goal is for the individual to develop and use personal competence in establishing and progressing toward the achievement of career goals. The development of problem solving and decision making skills, and the effective organization of work for the achievement of vocational goals are essential to the achievement of this goal. Objectives should reflect competence in such areas as the collection and analysis of information for problem solving, the selection of activities consistent with goals, and the development of personal skills and competencies that sequentially lead to a vocational goal. Additionally, the development of competency in coping with change (self or environmental) in the pursuit of a vocational goal is encompassed within this classification of behaviors.

2.21 Developmental Objective: The individual will develop problem solving skills related to career decision making.

2.211 Performance Objectives: The individual will be able to

K-3: gather information about jobs to describe and differentiate broad career areas.

4-6: formulate questions relevant to career goal choices, and to indicate possible sources of information to answer the questions.

7-9: evaluate a wide variety of information and informational sources with respect to accuracy and relevance for career decision making.

10-12: assign priorities to types and sources of information, relevant to career choice, and to apply the ordered information to choice problems.

2.22 Developmental Objective: The individual will develop career values consistent with his interests and abilities.

2.221 Performance Objectives: The individual will be able to

K-3: select activities that permit him to excell.

4-6: evaluate broad occupational areas on the basis of his interests and abilities.

7-9: select one or more occupational areas to explore that are consistent with his interests and abilities.

10-12: analyze a specific occupational area for consistency with his interests, abilities, and personal career values.

2.23 Developmental Objective: The individual will develop appreciation for, and efficiency in, goal oriented work.

2.231 Performance Objectives: The individual will be able to

K-3: demonstrate the application of sustained work effort in the completion of assigned tasks in school or at home.

4-6: select materials and methods appropriate to the completion of goal oriented tasks.

7-9: organize work tasks for efficient progress toward the achievement of a specified goal.

10-12: assume responsibility for the selection, use, and care of materials in the organization and completion of goal oriented tasks.

3.0 Generalization Level

3.1 Goal: Vocational Accommodation. The goal is for the individual to develop consistent and enduring behavior in making progress toward career commitment and preparation. The manifestation of consistent effectiveness in achieving career related developmental tasks is the basic consideration on judging the achievement of this goal. The consistent achievement of objectives at the perceptualization and conceptualization levels may provide adequate evidence to assess the achievement of this goal for the younger age groups.

3.11 Developmental Objective: The individual will develop increasing consistency in purpose and commitment to career related areas of activity.

3.111 Performance Objectives: The individual will be able to

K-3: give his reasons for selecting specific activities.

4-6: specify long range goals and immediate activities related to the goals.

7-9: specify general life goals and explain the ways internal and external influences may affect the achievement of his goals.

10-12: state his life goals, the reasons for selecting the goals, his plan for achieving the goals, and options open to change plans with changing conditions.

3.2 Goal: Vocational Satisfaction. The goal is for the individual to develop consistency in the interpretation of chosen career related activities as meaningful and satisfying to him as a person. Chosen activities should be perceived as meeting personal needs, and as leading to longer range personal development (vocationally). The demands and rewards of chosen activities should be congruent with individual interests and abilities, at any given point, and should be consistent with the individual's competency development over time.

3.21 Developmental Objective: The individual will develop self-evaluations of adequacy and satisfaction in the performance of career related activities.

3.211 Performance Objectives: The individual will be able to

K-3: experience personal satisfaction and receive recognition by achieving in career related school activities.

4-6: recognize that a task well done is rewarded by self-satisfaction and recognition from others.

7-9: recognize the relationship between his voluntary choices and his interests and abilities.

10-12: express feelings of satisfaction and adequacy in the pursuit of a chosen career goal.

3.3 Goal: Vocational Mastery. The goal is for the individual to develop consistent and enduring behavior in the satisfactory achievement (by internal and external criteria) of career related goals and objectives. This goal implies consistent striving and success in achieving goals that lead to higher goals that are congruent with individual ability. Thus, the mastery of basic skills leads to specific career preparation and to performance and growth in a vocation.

3.31 Developmental Objective: The individual will gain vocational mastery through satisfactory achievement in each step toward career goals.

3.331 Performance Objectives: The individual will be able to

K-3: achieve success in basic learning skills.

4-6: achieve success in basic learning areas.

7-9: achieve success in curricular areas related to a chosen high school area of emphasis.

10-12: achieve success in career related curricula, and/or in work situations.

Social Domain

1.0 Perceptualization Level

1.1 Goal: Social Environmental Orientation. The goal is for the individual to become aware of the social characteristics of people, and the social roles and responsibilities of those in his social environment. Awareness of social opportunities and expectations is emphasized, along with knowledge of appropriate social behaviors. The achievement of the goal may be estimated from the individual's ability to differentiate social roles and responsibilities in interpersonal processes in the home, school, and community settings.

1.11 Developmental Objective: The individual will develop a functional awareness of social roles and responsibilities in his environment.

1.111 Performance Objectives: The individual will be able to

K-3: identify ways in which he helps as a member of his family.

4-6: describe how different members of the school group help each other.

7-9: identify ways in which he can help others in the community.

10-12: explain how each individual has a role to play in the solution of social problems.

1.112 Performance Objectives: The individual will be able to

K-3: identify the major social responsibilities of each member of his family.

4-6: describe the responsibilities of each member of a school project group in achieving group goals.

7-9: describe the responsibilities of individuals and groups in achieving social order in the school.

10-12: explain the basic social responsibilities and actions that contribute to the solution of community social problems.

1.2 Goal: Social Self Orientation. The goal is for the individual to develop an accurate and satisfying perception of self in the social aspect of his environment. The emphasis is on a functional awareness of social skills, attitudes, and values that influence social development and adjustment. The social referents relevant to this goal include the family, peer groups, and other significant social groups in the individual's environment. The awareness of feelings toward others and toward social interactions is also included as part of this goal.

1.21 Developmental Objective: The individual will develop a functional awareness of his social attributes related to social adjustment.

1.211 Performance Objectives: The individual will be able to

K-3: identify personal characteristics that his peers view positively, such as friendliness, courtesy, etc.

4-6: describe his social traits and behaviors that lead to social acceptance among his peers.

7-9: explain how he would respond in a variety of social situations to achieve acceptance and avoid conflict.

10-12: describe his social strengths and weaknesses and explain reasons for his descriptions.

1.22 Developmental Objective: The individual will develop a functional awareness of the influence of his feelings and the feelings of others in interpersonal relationships.

1.221 Performance Objectives: The individual will be able to

K-3: identify feeling states that describe people, such as happy, sad, etc.

4-6: describe his feelings in different interpersonal situations.

7-9: describe how his feelings influence his reactions to others.

10-12: explain how his feeling expression is an important means of communication to others.

2.0 Conceptualization Level

2.1 Goal: Social Directional Tendencies. The goal is for the individual to develop social values and social sensitivity in his interaction with his social environment. The conceptualization of self in the social situation should enable the individual to evaluate his social affiliations, decisions, and values. Developmental progress is expected toward satisfying social relationships within the normative behavioral tolerances of his school, family, and community.

2.11 Developmental Objective: The individual will develop values for social affiliation and participation.

2.111 Performance Objectives: The individual will be able to

K-3: choose friends whose social interests are similar to his.

4-6: differentiate social characteristics of individuals in his school, and to be accepting of those who are different.

7-9: evaluate opportunities for social affiliation, and to choose social groups that are compatible with his values and those of his society (home, school, etc.).

10-12: affiliate with and participate in social groups and activities that permit social roles consistent with his social interests and abilities

2.12 Developmental Objective: The individual will develop respect and responsibility for social order.

2.121 Performance Objectives: The individual will be able to

K-3: differentiate acceptable from unacceptable social behavior in the classroom and on the playground.

4-6: describe appropriate social behavior for a variety of situations.

7-9: explain the reasons for particular social behavior in conflict situations.

10-12: initiate, organize, and assume responsibility for constructive social responses in group situations.

2.2 Goal: Socially Adaptive and Adjustive Behaviors. The goal is for the individual to develop social behaviors that will permit him to cope with the demands and expectations of his social situation, and to gain satisfaction from social relationships. The manifestation of constructive social behaviors in interpersonal relationships is equally as important as compliance with social expectations in the achievement of this goal. Social responsibility, cooperation, and contributions are indicators of development toward effective social adjustment.

2.21 Developmental Objective: The individual will develop interpersonal skills that show sensitivity to the feelings and social situation of others.

2.221 Performance Objectives: The individual will be able to

K-3: respond with understanding to the stress situations of other children.

4-6: make constructive contributions to assist others in stress.

7-9: make constructive suggestions for acceptable and orderly behavior of individuals in organized situations.

10-12: respond independently and constructively in the interests of the welfare of others.

2.22 Developmental Objective: The individual will develop an identity with and personal responsibility for the purposes of appropriate social groups.

2.221 Performance Objectives: The individual will be able to

K-3: understand and cooperate in family and school projects.

4-6: affiliate with organized groups in the school and to make overt contributions to the achievement of the group's goals.

7-9: identify with extra-curricular activities and to efficiently carry out responsibilities as a member of the group.

10-12: demonstrate skills needed for effective functioning in social groups, including cooperation, compromise, and active participation in the interests of the group.

3.0 Generalization Level

3.1 Goal: Social Accommodation. The goal is for the individual to develop and to use consistently effective coping behaviors in response to the expectations of the social groups (family, peers, and significant others) with which he affiliates. The emphasis is on reasonable conformity to group standards, and a display of effort to meet these expectations. This may be interpreted as individual expression of acceptable methods for reconciling differences and coping with social situations, rather than unquestioned conformity and total submission.

3.11 Developmental Objective: The individual will develop acceptance, efficiency, and consistency in coping with social expectancies and situations.

3.111 Performance Objectives: The individual will be able to

K-3: handle responsibilities in the home and school with a minimum of supervision.

4-6: cope with the expectations of his social groups as manifest by the absence of anti-social or socially disruptive behavior.

7-9: take initiative in the establishment and maintenance of group unity.

10-12: independently select and use social behavior appropriate to his role in a variety of situations.

3.12 Developmental Objective: The individual will develop skill in the examination of conflicting social views.

3.121 Performance Objectives: The individual will be able to

K-3: respect the views of others in conflict situations.

4-6: identify constructive alternatives in the solution of social conflict.

7-9: suggest constructive alternatives, and analyze the possible consequences of each, for the solution of social conflict.

10-12: achieve resolution of social conflict through a rational analysis of alternatives and an effective compromise of differences.

3.2 Goal: Social Satisfaction. The goal is for the individual to interpret his involvement in social situations (within normative tolerances) as meaningful and satisfying to him. The emphasis is upon voluntary involvement, and rewarding social experiences that lead to increased recognition and self-esteem for the individual.

3.21 Developmental Objective: The individual will develop increased interest in and values for social affiliation and involvement.

3.211 Performance Objectives: The individual will be able to

K-3: express positive attitudes toward social involvement.

4-6: achieve social acceptance in groups with which he chooses to affiliate.

7-9: value recognition and esteem by socially acceptable groups.

10-12: demonstrate self-confidence in and values for his social relationships.

3.3 Goal: Social Mastery. The goal is for the individual to display consistent and constructive social behavior. The emphasis is upon effective interpersonal skills that lead to expanding social experiences and a display of competence in achieving social goals. Social sensitivity and flexibility are indicators of the achievement of this goal.

3.31 Developmental Objective: The individual will develop effectiveness in interpersonal sensitivity, skills and communication.

3.311 Performance Objectives: The individual will be able to

K-3: express his feelings in a socially acceptable manner.

4-6: respond appropriately to the feelings of others.

7-9: engage in effective interpersonal relationships with persons who are physically and culturally different than he.

10-12: use individual differences as an asset in the development of warm interpersonal relationships.

Suggestions for Source Materials in Developing Objectives.

The examples presented above are illustrative of the types of goals and objectives that may be developed and classified in the taxonomy. These goals and objectives are believed to be representative of the developmental structures proposed by the taxonomic framework, but are only a few of thousands that could be generated for groups or individuals. Local staffs are encouraged to develop goals and objectives that are most appropriate for the target groups with which they work, as well as the unique features of the local program. The examination of goals and objectives formulated externally may be useful in examining the adequacy of the coverage of the local program. The following list was selected from many publications of goals and objectives that may be helpful in the process of formulating objectives appropriate for the local situation.

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Part II

IMPLEMENTATION OF A PROGRAM DEVELOPMENT AND EVALUATION MODEL

Chapter 4

Introduction

Evaluation-Based Program Development

Comprehensive and systematic pupil personnel services programs should be developed around outcome oriented goals and objectives and should be installed using evaluation-based program development and management procedures. Evaluation-based development and management procedures are helpful in suggesting ways to identify and collect information to assist decision makers in choosing from among available program options. These procedures are useful in analyzing, planning, implementing, improving, certifying, costing and judging the various components of PPS programs. Programs that are not amenable to an evaluation-based operation will have difficulty in being sufficiently systematic, sensitive, and adaptable to respond to changing individual and societal needs.

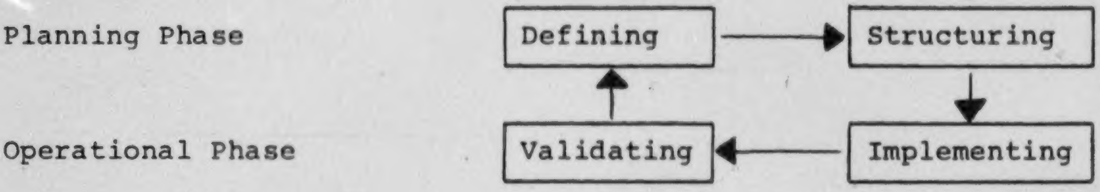
An evaluation-based management operation employs many concepts emphasized by systems thinking such as the analysis of relationships between elements; the generation of alternatives; the extensive use of feedback systems, and the use of prototypes (field testing). From this viewpoint, the process of program development, implementation, and judging the revision is continuous with each phase having a relationship with preceding and succeeding phases. In a systems model of evaluation even outcome or product evaluation becomes part of the next planning phase. If program planning is viewed as a continuous process, likewise evaluation will be a continuous process.

An evaluation-based management system is decision-centered. Organizing PPS programs around key types of decisions and their evaluation-attendant activities provides a management conceptualization that can be operationalized in any setting. The American Institutes of Research (AIR) have adapted Stufflebeam's (1968) evaluation model for planning comprehensive guidance, counseling and placement programs. The Mesa Arizona Public Schools and AIR have used this system as a basis for staff development (Jones, et al. 1975). As program developers become increasingly concerned about their programs becoming comprehensive and at the same time efficient and effective, they will need procedures to assist them in making decisions. A perspective that integrates program planning, decision making, and evaluation seems to be the most promising (Alkin, 1969; Stufflebeam, 1968; Campbell, 1971; Jones et al., 1975).

There is some agreement on the key types of decisions to be made. The constructs used in this handbook are compatible with others who make similar assumptions regarding the interrelationships between evaluation and program development. The PPS Systems Model suggests that the following four types of decisions require attention:

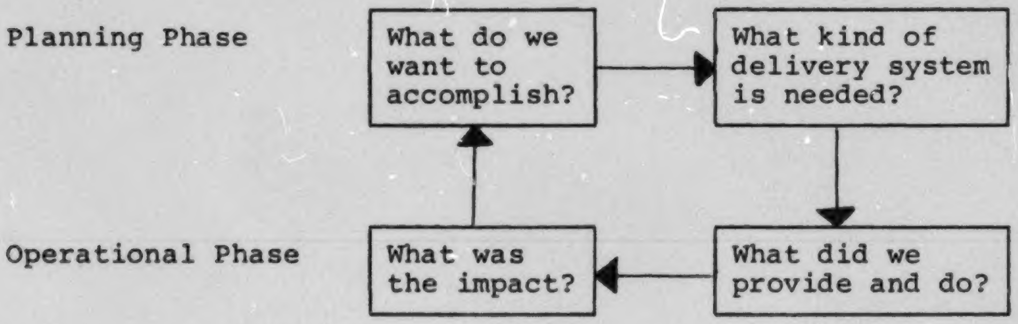
1. Defining
2. Structuring
3. Implementing
4. Validating

Defining and structuring decisions occur before a program gets under way and are part of the Planning Phase of program development and implementation. Implementing and validating decisions occur while a program is in operation and are part of the Operational Phase of program development and implementation. Since there is a flow and direction involved with these decisions, they represent a cybernetic-systems model that can most simply be represented by the following figure:

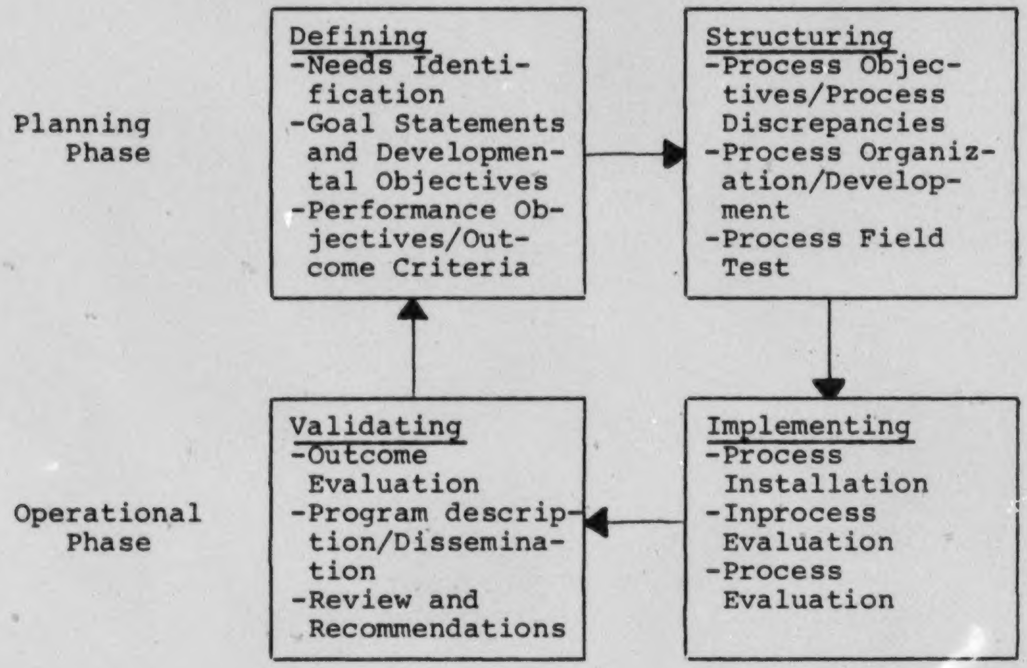


This framework can provide the program planners with a system to organize for more extended and detailed activities. Within each decision making stage there are many decisions. Likewise as the detail level of the framework is extended the elements and relationships will be expanded.

The understanding of an evaluation-based program may become more meaningful if the decision making stages are converted to basic questions concerning decisions that need to be made. The following figure converts the PPS model to basic questions:

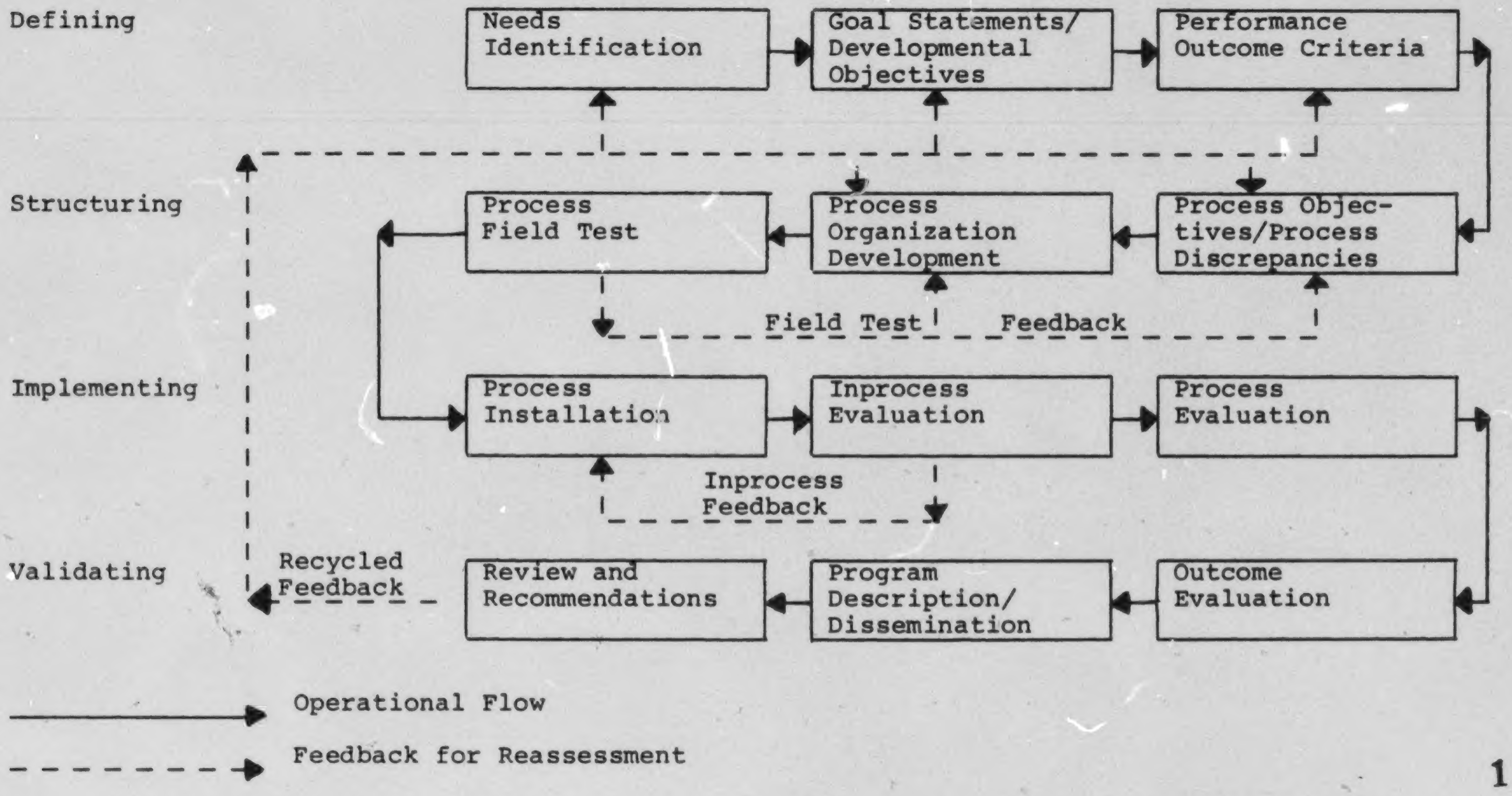

Planning Phase
What do we want to accomplish?
What kind of delivery system is needed?
Operational Phase
What was the impact?
What did we provide and do?

Answers to the above questions necessitates the identification of the basic components of each stage:


Planning Phase
Defining
-Needs Identification
-Goal Statements and Developmental Objectives
-Performance Objectives/Outcome Criteria
Structuring
-Process Objectives/Process Discrepancies
-Process Organization/Development
-Process Field Test
Operational Phase
Validating
-Outcome Evaluation
-Program description/Dissemination
-Review and Recommendations
Implementing
-Process Installation
-Inprocess Evaluation
-Process Evaluation

As the model is extended and broken apart more detailed descriptions will be needed to explain the process. The following diagram, developed from the systems model discussed in Chapter 2, shows the flow and feedback generated as the basic components are identified and their relationship examined:

Evaluation Based Program Development Sequence


Defining
Needs Identification
Goal Statements/ Developmental Objectives
Performance Outcome Criteria
Structuring
Process Field Test
Process Organization Development
Process Objectives/Process Discrepancies
Field Test
Feedback
Implementing
Process Installation
Inprocess Evaluation
Process Evaluation
Inprocess Feedback
Validating
Recycled Feedback
Review and Recommendations
Program Description/ Dissemination
Outcome Evaluation
Operational Flow
Feedback for Reassessment

Decision makers will ask questions to identify critical elements, then gather information about the elements (input); and finally, examine the findings and present results in a form that can be utilized (output). The key decisions in a particular stage can then be made. This may require the use of various procedures to gather information. Also, the analysis of the information may be carried out in a number of ways. Even after decisions about aspects of the program have been made it is important to produce some products that will illustrate and represent those decisions made in each phase, stage, or component. In summary the input-output approach can be viewed as "What information do we need to gather and what do we need to produce?" The following outline suggests some specific items that might be included in each stage.

Evaluation Based Program Development Input and Output

Defining

Input	Output
Local needs	Goal statements
Society needs	Developmental objectives
Pupil outcome data	Performance objectives
Developmental concerns	Outcome criteria
Special group needs	Special group objectives
Evaluation needs	Evaluation strategies

Structuring

Input	Output
Process needs	Resources available
Current resources	Staff development program
Discrepancies	Process organization
Survey of alternatives	Process/outcome specification
Attitude toward elements	Field test evaluation/redesign
Evaluation procedures	Evaluation design

Implementing

Input	Output
Planned activity descriptions	Process descriptions
Task/event schedules	Quantity statements-time, personnel, materials, costs, facilities
Resource allocations	Quality statements-side effects, attitudes toward program/experiences
Monitoring/recording procedures	Collection of outcome data
Budgeting procedures	
Evaluation schedule	

Validating

Input	Output
Standards/criteria attainment	Report of effectiveness and value
Effectiveness comparisons	Direct implications-modification, replication, new hypotheses, program decisions
Differential data	Indirect implications-populations, situations, methods, theories
Unanticipated outcomes	Cost effectiveness/benefits
Process evaluation data Quantitative analysis Qualitative analysis Cost	Dissemination to professional/lay groups
	Technical report for reference

Some tangible and concrete productions may result from this evaluation-based systems model:

- Needs assessment studies may come to be expected each year.
- A planning guide will be used as a reference.
- An operations manual will necessitate yearly input and interaction.
- An evaluation report may become an end of the year accountability project.
- Various communication releases will be disseminated to expectant publics.

The production of the Planning Phase would at a minimum be some form of "guidelines". A needs-based report converted to priority goals and objectives would be included with suggested program activities. The major product of the Operational Phase would be an accountability oriented evaluation report that could serve for validation of the program implemented under the planning guide. These two basic documents may have many sub-parts or; it may be beneficial to have the products broken out into several reports or documents.

This implementation section is devoted to a detailed stage by stage discussion. The intent of this discussion is (1) to suggest means to work through the PPS Systems Model, and (2) to comment on some of the issues and concerns in each stage.

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Chapter 5

The Defining Stage

This chapter discusses the defining stage of the planning phase. This stage is primarily concerned with defining needs and reducing needs to manageable goals and objectives. The chapter is organized around the major sections of (1) Defining Needs, and (2) Stating Goals and Objectives.

Defining Needs

Questions to be Asked

Planning a pupil personnel services program requires that attention be given to the question "What do we want to accomplish?" This question will lead to other questions, such as:

What societal needs should be considered?

What pupil needs should be considered?

What community needs should be considered?

What developmental tasks should be considered?

What content knowledge should be developed?

What process skills should be developed?

What attitudes should be developed?

What special populations needs should be considered?

What educational or personal deficits should be considered?

Procedures to be Used

A needs assessment is an essential first step in planning a program. The Kentucky State Department of Education Guidance Division noted that a needs assessment will do the following things for a program (1974): (1) identify the needs of pupils; (2) communicate valid and reliable information to key people needed for support of the program; (3) improve practices of the staff; (4) help develop mutual understanding and a cooperative relationship among staff; and (5) ultimately serve as a base from which the accomplishments of the program can be documented. Needs assessment is directed toward supplying information that will aid in describing what actually exists and defining what should exist. The discrepancy between what is and what should be represents a need. Needs assessment is utilized in the process of finding out what the needs are and determining priorities for program planning and development.

Needs assessment, as a basis for defining goals, is usually directed toward the consumers of the educational product (Sweigert, 1971). Target groups often identified are (1) pupils, (2) educators, (3) parents, (4) community members, and (5) employers. The basis for needs assessment content frequently represents broad societal needs, local needs, and contemporary pupil needs. The following outline summarizes needs assessment coverage and some informational sources:

Societal Needs

Guides

Federal and State sponsored projects
State Department of Education goals
Special and private projects
Local district guides
Taxonomies

References

Legislative actions
Books - professional/trade
Special journal issues
Professional articles
Institutional reports, e.g. National assessment, National Longitudinal Study

Local Needs

Groups

Employers
Community groups
Parents
Graduates
Educators
Interests groups

Procedures

State Department of Education needs survey
Commercial publishers needs survey
Modify another local survey
Construct local survey
Local surveys, conferences, meetings

Pupil Needs

Data

Standardized testing results
Interests/aptitude data
Placement/follow up data
Individual planning data
Attitude data
Special group data
Informal observations

Procedures

State/local testing program
Local agencies' studies/data
Local district's studies
Counselor records
Evaluation projects
Modify/construct local survey
- interviews
- questionnaires
- check lists
- card sorts

Societal Needs. Desirable pupil outcomes, as perceived by expert opinion, can be obtained by a review of professional literature that is judged credible and noteworthy. Consumer reaction to what is needed will likely be based on past or present conditions. On the other hand, future and idealized projections may suggest other needs. Philosophers and social critics often reflect on such issues. Professional educators, e.g., teachers, administrators, specialists, and teacher educators, represent another segment of expert opinion that may be surveyed directly or sampled through professional publications.

Toffler's Future Shock (1971) suggested some needs (note margin next to Toffler's copy):

> The inner life of the school thus became an anticipatory mirror, a perfect introduction to industrial society. The most criticized features of education today--the regimentation, lack of individualization, the rigid systems of seating, grouping, grading and marking, the authoritarian role of the teacher--are precisely those that made mass public education so effective an instrument of adaptation for its place and time. (p. 400)

need for a new school climate

> The rapid obsolescence of knowledge and the extension of life span make it clear that the skills learned in youth are unlikely to remain relevant by the time old age arrives. Super-industrial education must therefore make provision for life-long education on a plug-in/plug-out basis. (p. 407)

need for continuing education

Anyone who thinks the present curriculum makes sense is invited to explain to an intelligent fourteen-year-old why algebra or French or any other subject is essential for him. Adult answers are almost always evasive. The reason is simple: the present curriculum is a mindless holdover from the past.

need for relevancy

Why, for example, must teaching be organized around such fixed disciplines as English, economics, mathematics or biology? Why not around stages of the human life cycle: a course on birth, childhood, adolescence, marriage, career, retirement, death? Or around contemporary social problems? Or around significant technologies of the past and future? Or around countless other imaginable alternatives?

need to be educated for life problems

The present curriculum and its division into airtight compartments is not based on any well thought out conception of contemporary human needs. Still less is it based on any grasp of the future, any understanding of what skills Johnny will require to live in the hurricane's eye of change. It is based on inertia--and a bloody clash of academic guilds, each bent on aggrandizing its budget, pay scales and status.

This obsolete curricula, furthermore, imposes standardization in the elementary and secondary schools. Youngsters are given little choice in determining what they wish to learn. Variations from school to school are minimal. The curriculum is nailed into place by the rigid entrance requirements of the colleges, which, in turn, reflect the vocational and social requirements of a vanishing society. (p. 410)

need to learn how to choose

The curriculum of tomorrow must thus include not only an extremely wide range of data-oriented courses, but a strong emphasis on future-relevant behavioral skills. It must combine variety of factual content with universal training in what might be termed "life know-how." It must find ways to do both at the same time, transmitting one in circumstances or environments that produce the other. (p. 418)

need for futureness

Many State Departments of Education provide educational goals for their particular state. A local district may wish to relate their needs assessment to State goals. At least, some attention to breadth of coverage may be provided by this approach. For example, the State of Missouri suggested the following educational goal areas:

- I. Intellectual Development
    - Communication
    - Quantitative Thinking
    - Social Processes
    - Scientific Understanding
    - Decision Making
    - Aesthetic Sensitivity
- II. Physical Development
    - Growth and Maturation
    - Health
    - Recreation
- III. Social Development
    - Social and Physical Environment
    - Cultural Awareness
    - Governmental Institutions
        - Citizenship
        - Avocational Pursuits
        - Concept of Self, Morality, and Values
- IV. Career Development
    - Social Significance of Work
    - Occupational Exploration
    - Occupational Preparation
    - Occupational Education (Adult Training and/or Retraining)

The National Longitudinal Study of the High School Class of 1972 by the USOE provided the following summary need data (Fetters, W. B., 1973):

> 5. Values and Self-Concept. In response to a question dealing with life values, the 10 items presented were rated as "very important" by the following percentages of seniors: "Being successful in my line of work" (84 percent), "finding the right person to marry and having a happy family life" (82 percent), "having strong friendships" (79 percent), "being able to find steady work" (78 percent), "being able to give my children better opportunities than I've had" (67 percent), "working to correct social and economic inequalities" (27 percent), "having lots of money" (18 percent), "getting away from this area of the country" (15 percent), "being a leader in my community" (12 percent), and "living close to parents and relatives" (8 percent).

Regarding the selection of a job or career, the factors indicated most often as being "very important" were "opportunities to be helpful to others or useful to society" (53 percent) and "opportunities to work with people rather than things" (49 percent). Many students also felt it was "very important" to have "opportunities to be original and creative" (39 percent) and to be "living and working in the world of ideas" (35 percent). The more practical aspects of a job or career were marked less frequently as being "very important," as follows: "Opportunities for moderate but steady progress rather than the chance of extreme success or failure" (34 percent), "avoiding a high pressure job that takes too much out of you" (31 percent), "having a position that is looked up to by others" (25 percent), "freedom from supervision in my work" (23 percent), "making a lot of money" (22 percent), and "the chance to be a leader" (16 percent). Although the rank order of these 10 career-choice factors was essentially the same for girls and boys, girls placed considerably more stress than boys on helping others and working with people, and gave much less emphasis to the factors involving supervision, money, and leadership.

Local and Pupil Needs. Collection of needs assessment data from a variety of groups requires a considerable amount of time, and thus the need to be selective regarding groups to be assessed. A sampling procedure may be justified. Some useful information is usually available but may have been used for other purposes. School performance and achievement data are good sources of pupil needs indicators. School test results, school records, and placement/follow-up studies can be suggestive. Survey instruments used to collect data from representatives of these target populations can be obtained from sources such as commercial publishers, state departments of education research sections, research and development consultants and other school districts. A local school district can develop their own instrument if they desire.

Career development inventories may be used for needs assessment purposes. While the primary use of most inventory information is for individual counseling and guidance activities, summary data can be used to assess student needs and program needs. The publishers of the Career Maturity Inventory (California Test Bureau), and the Assessment of Career Development (American College Testing Program) indicate that their inventories can be used for needs assessment purposes. Each inventory is organized around a conceptual model and is expressed in terms of components or areas. The developer's model is based on assumptions and a rationale about career development needs. The areas represent the critical or central features of the inventory developer's career development system. The ACD (ACT) identifies three major developmental tasks: *Occupational Awareness*, *Self Awareness* and *Career Planning - and Decision Making*. The CMI (CTB) focuses on aspects of "vocational maturity" which includes *Career Choice Competencies* and *Career Choice Attitudes*. If *these instruments are representative of what is valued*, then local youth should show evidence of accomplishment in these areas.

- How do the pupils in your school perform on various areas?
- Do your pupils deviate from state or national norms on components or subfactors?
- What statements can be made about local performance by area, part, or item?

Sequential development is usually represented by grade level data. Most career development instruments focus on junior high and senior high grade groups e.g. ACD (ACT) Grades 8-11 and CMI (CTB) Grades 6-12. Planned programmatic experiences or unstructured events may enhance or inhibit development at certain grade levels. Checking developmental patterns may reveal level/age needs.

- Do your school groups follow a similar pattern to state and/or national groups?
- Does development vary by area?
- Can you explain accelerated or depressed developmental patterns?
- What statements can be made about the developmental sequences in your school?

Certain predominate characteristics about the school population will emerge as inventory information is examined. Equally important are those minority or subtle elements that are often overlooked when making generalized statements about local pupil needs...e.g. pupils needing career information about trade and apprenticeship programs may be overlooked in a college oriented school population. As a summary description of the pupil population evolves, emerging needs of such a population(s) should become apparent. If various dimensions are considered, and if some detailed attention is given to the variety of responses, a summary descriptive statement of the pupil population would present many interesting aspects to be considered when discussing program needs. Some instruments lend themselves to these kinds of data more than others. The ACD (ACT) includes a variety of opinion and interest elements compared with the CMI (CTB) where the focus is on competence type responses. The ACD (ACT) provides information about career misconceptions, occupational preferences and a number of personal perception components.

- What descriptive dimensions could be included in your school's summary?

- What subtle variations and specific details were noted that may be easily overlooked?

- What are the implications for school goals and program development?

There is some common group information presented in most career development data. Classification by grade and sex is a common format. If the raw data have not been coded for summary data on a particular grouping, it may be worthwhile to make arrangements for extracting what is needed for differential analysis.

In addition to predetermined groups, instruments may help identify groups that deserve special study. For example the ACD (ACT) will provide information about various levels of education and thus the "college bound group" could be identified and studied further.

- Is there data that indicate differential needs?

- What statements can be made about girls' needs and similarly, about boys' needs?

- Are there indications that there are special groups that merit special attention and if so, what are these groups?

Some data may have direct implications for need statements, however, inventory information will most likely need to be examined and compared with other known factors. The career development outcome data may only be symptomatic, or a manifestation, of a more basic and pervading condition. Hypotheses may be checked further as other data or information are gathered. Other items on the inventory may be suggestive of similar needs.

Suppose that an unusually high number of 11th graders responded positively to the ACD (ACT) Item 3. "Most people do not need to begin career planning until their final year in high school." How could this information be converted into a need statement? What are some hypotheses that could be used to explain this condition? Could it be a lack of career information? Maybe this is an expression of a passive-dependent attitude within the schools; or, an expression of innocence about career planning that reflects a need for exploratory experiences. A combination of need factors may also be suggested. Thus after examining other information and reflecting on various associated factors, pupil need statements can be generated.

Instruments that focus on need variables, other than career development, may yield still another needs list. What is the content and objective of the instrument? There are many instruments that focus on academic or interpersonal/self needs. The Mooney Problem Checklist provides a list of problems that pupils can check and rank. Self concept surveys offer opportunities for the subjects to express "personal needs." Study habits inventories have frequently focused on academic needs. Again, need statements can be generated from these types of data.

It is also possible to design assessment processes for more direct and informal feedback. The Mesa Arizona Public Schools (McKinnon, 1974) suggested a number of assessment strategies built around the use of a card sort. First, a list of possible outcome statements is developed on the basis of a literature review and pupil and staff interviews. Each outcome statement is then written on a separate card and the decks of these cards are presented for pupil and adult reactions. Samples of target groups may be selected and "interviewed" in groups, or the card sorting procedure can be used in an individual setting with one interviewer for each subject. Also, the card statements can be converted into a checklist and used like other survey instruments.

The following are the priority needs selected by a sample of sixth grade pupils who used the card sort method:

A. Academic Learning

1. I need to be more comfortable when giving information or speaking in class.
2. I need to try ways of improving my grades.
3. I need to improve my ability to concentrate.
4. I need to understand how each teacher grades me.
5. I need to know how to study better.

B. Educational-Vocational

1. I need to know what various jobs are like and how my special talents and interests will help me do those jobs.

2. I need to know about requirements for college.
3. I need to know more about high school and the requirements I will need.
4. I need to know if I have to go to college to do what I want to do.
5. I need to know what I have to do to get a job.

C. Interpersonal
   1. I need to have at least one person I can be close with.
   2. I need to accept criticism better.
   3. I need to know things about me that bug others.
   4. I need to be less afraid when meeting people for the first time.
   5. I need to be less sensitive and less hurt by what others do and say about me.

D. Intrapersonal
   1. I need to save money for the things I need.
   2. I need to earn more money.
   3. I need to be more satisfied with my life, my achievements, and myself.
   4. I need someone to talk to when personal problems arise.
   5. I need to feel less lonely.

E. Career Education
   1. I need to begin thinking of a career that makes use of my personal talents.
   2. I need to know how my choice of future jobs relates to my personal strengths and weaknesses.
   3. I need to understand the advantages and disadvantages of different jobs.
   4. I need to know how to make decisions about school problems.
   5. I need to recognize the ways a job can bring me satisfaction.

Dimensions of Needs Identification

Various dimensions of needs identification should be considered. First, how basic or global are the needs under consideration. The need expressions "to have a positive self concept" is a more generalized, molar need statement than "to speak with confidence in front of a class." The more specific need expression may be related to the global need expression, thus the use of need statements to determine institutional or program goals would seem to be more broadly stated than "enabling" objectives. Therefore, need statements related to societal benefits and general human development would probably not specify elements or suggest conditions. However, immediate pupil felt needs and individual effectiveness concerns would be expressed in terms that identify relevant details and are described in an observable manner.

It is common practice to describe needs assessment as the process of determining the discrepancy between what exists and what is desired. If this proposition is observed rigidly, only contemporary needs will be recognized and the needs of the past, some that have been fulfilled, will be overlooked. It may be advantageous to be aware of this needs assessment perspective when gathering information from procedures that ask groups about their perception of needs. When asked to respond to a need statement, the subject would be justified in asking whether it made a difference if this statement represented a need they feel is important but is being satisfied, or must it represent an unmet need of the present. From a program planning departure it may be important to recognize which needs are being met as well as those that deserve attention. The redirecting of resources from one area to another may create needs and may not really be worth the effort. Therefore, the developer may wish to include the option for both types of responses in his assessment procedure.

The opportunity to respond to a relevant sampling of need expression is another significant factor. Simply stated, "How can a need be expressed if no one presents the statement?" Limited coverage, insignificant choices, or redundancy of statements may distort a needs survey. There are often advantages to an adopt-adapt strategy of selecting and modifying statements from existing sets rather than constructing new sets. This avoids the possibility of overlooking important areas and insures a broad spectrum of possible needs. The expense of repetitions can be avoided, as well as, making it possible to select statements that are appropriate for their specific purpose. Taxonomies, research and development projects, test and book publishers, and district curriculum guides are common sources of need statements.

Some needs identification procedures concurrently focus on context perceptions as well as pupil outcomes. Pupils' perception of the school functionaries and processes are immediate needs but are directed toward the institution and its processes. While these are important aspects of program planning, they often direct attention to the process aspect at the expense of pupil behavior. For example, counselors may be perceived as "helpful" but the pupils may still lack career planning skills. It may be desirable to separate these needs identification procedures so that each receives appropriate attention. Process needs identification is discussed later when dealing with Structuring Stage questions.

The need statements that the program planners agree upon represent the general priorities for pupil outcomes, and become the basis for the formulation of goal statements and subsequently the generation of objectives.

Stating Goals and Objectives

Goal Statements

Program planning is best expressed in terms of goals, objectives and outcomes. Formulation of the goals will be based on the needs expressed. It is the responsibility of those designated as program developers (Curriculum Committee, Guidance Committee, R&D Committee) to translate needs, into program goals. These program goals will then be analyzed and broken down into elements that can be expressed in terms of measurable performance objectives and expected pupil outcomes. These statements will serve as guidelines from which program activities can be assessed and structured. Likewise, evaluative procedures and instrumentation will be directed toward measuring the statements of performance objectives and their accompaning process objectives.

The conversion of needs statements into goal statements often requires the rephrasing, combining and reorganization of the need statements. It may be helpful to convert need statements into positively stated concepts which can be subsequently changed into goal statements with little difficulty. After goal statements have been developed it may then be helpful to attend to priorities. While priority concerns may become important again when structuring and implementing the program, situational issues and special population needs may require that attention be given to priorities as goals are interpreted into measurable objectives. Likewise, a priority hierarchy may be beneficial as constraints and resources are assessed in terms of program structuring (to be discussed later).

Regardless of the question of priority, a set of goal statements is needed to provide the framework and serve as a base for program development. The commitment to these goals should be affirmed by the program development group and the school's administration. Since goal statements become the basic determiners of a program, they deserve considerable time and attention.

Goals will be translated into objectives whose cumulative effect will be goal attainment. Since objectives contribute to the goal, the developmental sequencing and relationships becomes important in planning. Scope and sequence curriculum development is not new. However, the planning of PPS programs in this manner is a relatively new approach. Basic requirements for this kind of planning are (1) knowledge of the learner and his environment, (2) knowledge of the "content" and (3) knowledge of the interactive effects. Developmental psychology, research literature, and previous experience with similar educational objectives will serve as the primary resourcesfor goal analysis and synthesis. Unlike some other program areas, there is a paucity of PPS programs that are objectives-based. Direct references such as local school curriculum guides, state department of education guidelines, and professional books are either rare or in formative stages of development and validation.

Developmental Objectives

The literature surrounding the technology of behavioral objectives has focused on traditional cognitive subject matter content in an isolated context. PPS programs are likely to include affective and process goals. Additionally, developmental concerns that relate to personalizing knowledge, skills, and attitudes require that attention be given to interactive effects over individuals' school years/life span. Therefore, it is suggested that developmental objectives may be used to give clarity to the sequencing and provide a monitoring mechanism for program development and evaluation. The ordering of developmental objectives not only provides a framework for goal attainment but serves as an organizer for the educational system as it is structured to achieve the goals. Early childhood, elementary, middle, and secondary school organizational units can thus identify their respective responsibilities in the total developmental process as each contributes toward reaching goals. The meaningful relationship between organizational units can be recognized readily as developmental objectives become their immediate point of departure and the eventual instructional investment.

The sequencing of developmental objectives converts the language of the goals into statements that are more representative of pupil behavior found at various levels and ages of development. School staff members representing these levels can relate to these statements from their own experience. This perspective allows specific and concrete performance objectives to be formulated (see Chapter 3). By reducing the area of concern and by clarifying the target development, proficient development of performance objectives can be achieved.

Performance Objectives

An analysis of the developmental objectives is the next task. Specifically, developers ask the question "What behaviors must be exhibited to indicate that the developmental objective has been reached?" Those critical behaviors that represent the achievement of a developmental objective must be identified. These critical behaviors are indicated by some type of observed performance. There may be more than one potential indicator of the achievement of an objective. The possession of knowledge, skill, and attitude can be indicated by more than one indicator or observable event.

An outcome is an indicator that is judged to be representative of the achievement of an objective. As outcomes are selected, their representativeness (validity), should be a primary concern. In summary, the stated performance objectives should represent the intent of the developmental objective and provide an indication of whether it has or has not been reached. The sum product of the performance objectives should be the achievement of the goals. The relationship between achievement of performance objectives and goal attainment is logical and interdependent. (See Part I, Chapter 3 and note the taxonomic model for objective development and writing.)

Outcome Expectancies

Performance objectives which include the conditions under which the outcomes are to be observed, and specify the level of performance (criterion level) are immediately relevant. If, however, the conditions and criterion level are likely to change, these specific conditions may not be detailed in the long range PPS guidelines. Such specifications may best be reflected in yearly PPS operational goals. Program goals may retain the same basic thrust or intent while the desired level of performance and situational variables may change the specific outcome expectancy statements. However, for some program planners it may be desirable to integrate the specific outcome expectancy statements into program planning and therefore reflect such changes in a new total program plan each year.

A performance objective should be stated in terms of pupil outcomes that will satisfactorily indicate that the objective has been achieved. "How should pupils behave?" "What observed behavior, under what conditions, at what level would indicate that the objective had been reached?" If only a special or limited group of subjects is expected to reach the objective, this should be stated. If there are special conditions under which the behavior is to be demonstrated this should be described. To be an acceptable mode of expression, the performance objective must be judged to be a valid indicator, and be feasible to measure. This expression can be measured directly through written or oral test items; through mediated processes such as ratings, observations, and self report procedures; or through indirect manifestations such as attendance/drop-out data and participation data.

The designation of a criterion level of performance is determined from what is judged to be an acceptable standard of performance. Pupil variables, situation variables, process input, and societal values will influence the standards set. Norm-referenced measurement tools and research studies may be suggestive of standards. Criterion-referenced standards may be suggested by pupil development data and previous experience with similar unit proficiency tests.

The following examples of style and format may provide guidelines for developing objective-based materials:

Example A

Goal Statements:
Generalized verb with no subject-area limitations.
Example: The individual will understand the uniqueness of self and others.

Developmental Objectives:
Generalized verb with general subject-area descriptors.
Example: The individual will understand ways people are similar and different.

Performance Objectives:
More specific verb with specific subject-area or task descriptors.
Example: The individual will identify his or her personal characteristics.

Outcome Expectancies:
Specific conditions, a measurable verb and criterion measures for the action. Target groups and criterion levels may also be specified.
Example: Given a list of 20 adjectives, each individual will identify 5 which best describe her or him and 5 which least describe her or him.

Example B

Goal Statements:
Generalized verb with no subject-area limitations.
Example: The individual will understand the structure of the world or work.

Developmental Objectives:
Generalized verb with general subject-area descriptors.
Example: The individual will understand various methods of classifying occupations.

Performance Objectives:
More specific verb with specific subject-area or task descriptors.
Example: The individual will classify occupations

according to the Dictionary of Occupational Titles.

Outcome Expectancies:

Specific conditions, a measurable verb and criterion measures for the action. Target groups and criterion levels may also be specified.

Example: Given a list of 15 occupations, 80 per cent of the tenth grade group will classify 13 of them according to the Dictionary of Occupational Titles classification system.

Priority Setting

It conceivably might be possible to respond to all identified needs in an efficient and effective fashion. However, the resources needs of a comprehensive program, along with the other current demands on educational resources make this an unlikely possibility. Therefore, priority setting will probably become a definite decision making problem.

Deciding who should participate in priority setting and in what fashion becomes the initial concern. In spite of sophisticated needs assessment procedures with input from many sources, it is possible to maintain arbitrary priority setting power. The needs assessment, goal/objective development, and priority setting system should be thought of as an inclusive package wherein all are treated together. For example as pupil needs are assessed from various groups a weighting system or sampling method may be used to represent each group in terms of their relative importance. Subjects may be asked to rate or select items and thereby apply a built-in priority system in their item responses. A process such as the Delphi technique may be used to reach consensus without conflicts by utilizing controlled group feedback and the summarization of opinion. Priority setting concerns are generated from the following elements:

Priority Setting Elements

I. Societal Needs
    1. youth stated needs
    2. other (community, educator, parent) stated needs
    3. state goals
    4. national goals

II. School Resources
    1. materials, facilities and equipment
    2. personnel
    3. time
    4. process (staff development)

5. community support
6. administrative support

III. System Readiness
1. community attitude
2. developmental needs
3. complexity and interactive effects
4. educational climate

Some administrators may contend that the operational aspects of the educational system will impose constraints and thus determine priorities. How feasible are the goals and can they be achieved within the resources available? The goals themselves may be complex or difficult to achieve. Also, the demands on school resources, such as staff development, may be so great that methods to achieve goals could not be developed. In most instances, educators, or those closely associated with school operations, would respond to such concerns.

The simplest priority setting procedure is to rank a predetermined set of goals suggested by an authority such as the State Department of Education. It is also relatively easy to use frequency of response by pupils on a needs assessment instrument as the basis for converting items into a priority list. The Mesa Arizona schools (McKinnon, 1974) asks pupils to rank selected needs on a card sort in two ways. First, they respond in terms of most important needs and secondly, in terms of those needs which they would like the school to help. The "wants assistance" ranking becomes the priority list.

As more groups and other elements are taken into consideration, the more complex becomes the priority setting procedures. Some form of a weighting system is often used. The Kentucky State Department of Education (1975) uses the following integrated approach:

1. Develop 100 goal statements

2. Select 20 out of 100 (each group i.e. parents, students, educators)

3. Apply weights by amount of agreement between groups

4. Rate current attainment discrepancy for further weighting

5. List by total weight and then assess constraints against each highly weighted goal

6. Compile the final list

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Chapter 6

The Structuring Stage

This chapter treats the structuring stage of the planning phase. The structuring of the PPS process and of the evaluation are presented in separate sections, however this does not mean that these are discrete planning steps. Rather, the structuring of process and evaluation should be coordinated as one continuous and integrated part of program development and evaluation.

Process Structuring

Questions to be Asked

"What kind of delivery system is needed to enable pupils to achieve PPS goals and objectives?" is the question of major concern in the structuring stage. Other important questions include:

What staff competencies and attitudes need to be developed?

What instructional/guidance strategies and activities should be used?

What materials, media and policies are necessary?

What facilities and equipment will be needed?

What can be done to foster community and parental involvement?

What materials need to be designed for special groups, e.g. mentally retarded?

What constraints of the local situation should be recognized as crucial to the program?

Procedures to be Used

After the performance objectives have been stated and confirmed, by the PPS and administrative staff, the educational system must be structured so it can deliver the kind of educational experiences that will enable the pupils to perform as indicated in the performance objective statements.

Process objectives are developed to describe the kind of experiences deemed necessary for pupils to perform as dictated by the performance objective statements. These enabling objectives make it possible for pupils to perform the behaviors as indicated. There is usually more than one sequence of experiences that will enable an outcome to be achieved. Thus, for each performance objective process alternatives should be generated. "Which procedure (methods/techniques) can be used to help pupils behave in a certain way (performance outcome statement)?" The listing of optional strategies and vehicles with the advantages and disadvantages of each, is called a methods-means analysis by educational systems designers (Kaufman, 1972). The following adaptation of this analysis is suggested:

1. The pupil outcome and the general experiences that must be provided are stated first.
2. Under Performance Requirements list the requirements any methods-means must meet.
3. Under Methods-Means Possibilities list any methods-means combinations that meet the requirements in the previous list.
4. For each methods-means combination list advantages, such as availability, cost, time, reliability, transportability, ease of use.
5. For each methods-means combination list disadvantages in a manner similar to step 4.
6. Store form with other Objective/Provision forms.
7. Summarize into functional families since the methods-means of various Objectives/Provisions may be related.

The following format can be used to examine the methods-means possibilities.

Objective/ Provision	Performance Requirement	Methods-Means Possibilities	Advantages	Disadvantages
2.4.1	A	1.	________	________
		2.	________	________
	B	3.	________	________
	C	4.	________	________

Adapted from Kaufman, 1972 pp. 123-124

A ranking or weighting system may be used when analyzing the advantages and disadvantages. Possible instructional and counseling procedures may be generated by observing on-going PPS activities, observing those used by others, or inventing new techniques. AIR suggested a list of processes that might be used (Jones, et al., 1972).

POSSIBLE INSTRUCTIONAL AND COUNSELING PROCEDURES

(STUDENT ACTIVITIES AND MATERIALS)

1. Reading printed materials
    a. Narrative
    b. Programmed
    c. Cartoon booklets
    d. Kits

2. Observing
    a. Live demonstrations
        1) Peer student models
        2) Cross-age models
    b. Live dramatizations
    c. Films
    d. Film-strips
    e. Slides
    f. Video-tapes
    g. Any one/or all of the above observational media followed by guided practice supervised either by the models or by counseling personnel.

3. Listening
    a. Radio
    b. Sound recordings
        1) Records
        2) Audio-tapes

4. Interacting individually and/or in groups with:
    a. Counseling personnel
    b. Community resource persons

5. Practicing behavior under simulated conditions
    a. Simulation games
    b. Simulated work samples
    c. Role-playing
    d. Behavioral rehearsal

6. Gathering personal assessment information:
    a. Responding to instruments measuring personal characteristics
    b. Collecting information from other people
    c. Self-assessment activities

7. Participating in computer supported programs

8. Using on-line computer technology

The outcome expectances should have a logical or empirical relationship with the methods or techniques chosen. Techniques that enable the student to perform in a manner most closely resembling the performance called for by the objective is a logical initial hypothesis. The practicing of behavior similar or closely resembling performance to be expected would be a typical provision. If however, the desired performance behavior is too complex or difficult, a task analysis should be undertaken to isolate contingent operational objectives that will provide a systematic instructional sequence to insure step by step achievement of the process objective. Again, various combinations of procedures may be appropriate for attempting to reach an objective.

After the optional instructional and counseling procedures have been identified, they should be (1) ranked according to how likely they are to achieve the objective specified in the behavioral statements and (2) ranked on the basis of administrative criteria that would include feasibility concerns such as cost and time constraints and in some instances, sociopsychological reactions. Gathering information to make such rankings usually requires the determination of the procedures that (1) are already available in the school (on hand) (2) are available for purchase, (3) are available to be modified or adapted, or (4) must be developed from specifications. The following example shows the Methods-Means analysis in a brief format. The advantages and disadvantages could easily be extended.

Objective/ Provision	Performance Requirements	Methods-Means Possibilities	Advantages	Disadvantages
Grade 2 pupils will be able to identify their personal characteristics	1. use personal descriptors 2. state similarities to others 3. state differences from others 4. identify personal uniqueness	1. DUSO Kit	interest organization quality control	cost inservice needs teacher control
		2. FOCUS Kit	interest organization quality control	cost inservice needs teacher control
		3. Bessell Magic Circle group	model involvement organization	inservice needs time quality control
		4. Individualized workbooks	teacher involvement personalized cost	teacher demands quality control time
		5. Combination Kit plus Magic Circle	interest model involvement	cost time inservice needs
Inservice all Senior High staff; developmental program for using values clarification methods	1. utilize content knowledge 2. utilize techniques and methods 3. aware of processes and systems 4. aware of personal values	1. Consultant-short term workshop	interest quality time	follow through cost relevance
		2. Extension course from University	incentive organization models	relevance interest involvement
		3. Adapt/adopt materials	relevance cost time	participation personalized model
		4. Course/individualized consultant combination	personalized organization quality	cost time management
		5. Consultant and adapt/adopt materials combination	interest model relevance	cost management incentive

Process Needs Assessment

A functional assessment of the present PPS program is a type of "needs assessment" that describes the impact of the current (on hand) program and the attitude toward the functionaires. Assessment of on-going procedures may be necessary before assuming that they can deliver process objectives that are expected in the proposed program. Similar needs assessment procedures discussed earlier in terms of performance outcomes can be used in the program functions needs assessment. Such consumers as learners, teachers, parents, administrators and community members can be asked to provide their perception of current program activities and the general school climate. In addition, a description of resources and a report of operational effectiveness should be obtained from PPS staff members. A self study of activities, facilities, staff competencies, student ratios, staff attitudes, and other related data would definitely establish what is available rather than operate under idealized assumptions.

Perceptions of staff, program functioning and school climate provide information that focus on attitudes, processes, and operational side effects. These perceptions can be gathered from educators and various consumer groups - pupils, parents, community members. Data obtained can be integrated into the methods-means analysis. Staff development needs are also frequently indicated.

Staff Needs

Area	Assessment Data
attitudes	attitude scale
role orientation	competency rating/checklist
competencies	open ended questionnaire
activities exploration	requests for training
community exploration	individual self reports
evaluation	time utilization records
utilization	
differentiated staffing	

Resource Needs

instructional materials - resource guide review
instructional media - resource guide review
school policies/procedures - operational survey
community utilization - participation request form
parent involvement - parent attitude/participation instrument
facilities and equipment - building/area reports

Administrative Needs

*school policies/procedures - operational survey
*community utilization - participation request form
*parent involvement - parent attitude/participation instrument
*facilities and equipment - building/area reports
program operations - steering committee checklist
community advisory - advisory group questionnaire
school climate - student/staff rating scale

*Same as Resource Needs but for a different purpose

The collection of data about the educational process (e.g., functionaires, procedures, programs, climate) may require the use of specific, process-type instruments. Often process information is collected along with pupil outcome data. Also, some procedures survey process needs directly while others indirectly imply process needs.

What are some of the implications of data from the following items?

Asked of pupils:

4. The best way for me to find out more about my abilities is for me:
    A. To talk with my parents
    B. To discuss it with one of my teachers or my counselor
    C. To discuss it with friends
    D. To take tests
    E. To study the things I do best
    F. Other
    G. I am not sure I know the best way to find out more about my abilities

Priority Counseling Survey-JH Form A
Educators Assistance Institute
Los Angeles, California

Asked of parents:

9. Have you been adequately informed regarding the guidance program in your local school? Yes No

17. There appears to be mutual trust and confidence between students and teachers. Yes No

Missouri Student Needs Survey-Parents Section
State Department of Education
Jefferson City, Missouri

Asked of teachers:

4. Do you feel that administrators and counselors provide necessary services and feedback to you concerning students' needs? Yes No

Missouri Student Needs Survey-Teacher Section
State Department of Education
Jefferson City, Missouri

Asked of pupils:

11. My teachers still respect me as a person even when I've done poorly on my school work.
    True
    Mostly true
    Mostly false
    False

24. My counselor helps me most with:
    A. Schedules
    B. Educational and vocational planning
    C. Personal concerns
    D. Gives me useful information
    E. No help
    F. Have not gone to the counselor

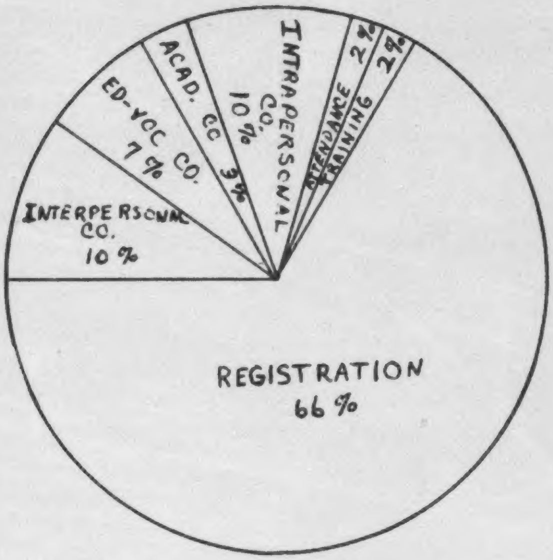
Missouri Student Needs Survey-Student section
State Department of Education
Jefferson City, Missouri

Process concerns are frequently noted in perceptions of staff and programs, requests for assistance, recall of the amount and type of activities experienced, and lack of knowledge about how to proceed. The Assessment of Career Development (American College Testing) asks pupils to respond to a "Help Wanted Check List" and in another section provides perceptions of various aspects of the guidance program. QUESTA (Educational Testing Service) assesses many aspects of school climate including perceptions of minority group relations.

Prioritizing time allocation for various activities is a common adjustment to make based on "current" versus "needed" time commitments. As a result of acknowledging the discrepancy between the two allocations, staffing, procedures, resources and other items can be brought into harmony.

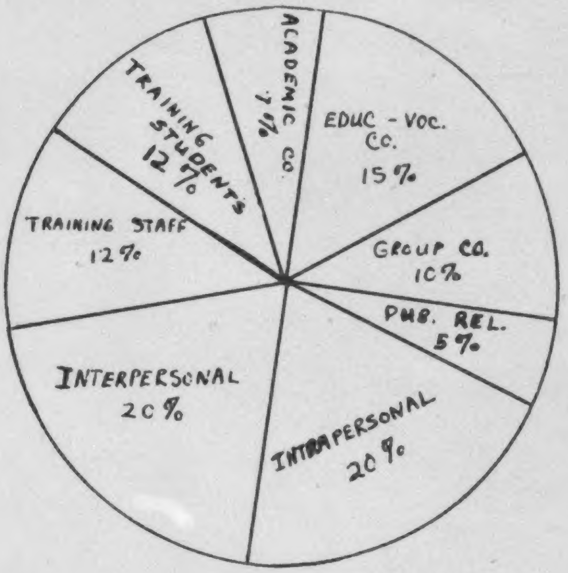
The following is an example of an actual senior high counseling staff current-recommendation summary. The recommended allocation was based on other needs assessment information.

Current Senior High Program Summary



	Estimated % of Time
Academic Learning Counseling helping students to learn better in school and elsewhere; helping them improve their study skills and habits	3
Educational-Vocational Counseling helping students plan better both their current and future schooling and work	7
Interpersonal Counseling assisting students to get along better with others	10
Intrapersonal Counseling facilitating students to feel better about themselves as individuals	10
Conducting student registration schedule changing and orientation	66
Handling attendance concerns	2
Conducting and Receiving In-Service Training	2
Total Percentage of Time	100%

Recommended Senior High Program Summary



	Estimated % of Time
Academic Learning	7
Educational-Vocational	15
Interpersonal Counseling	20
Intrapersonal Counseling	20
Group Counseling Preparation for college, world of work and marriage	10
Providing teacher-staff training	12
Training student peer registrars scheduling	11
Conducting public relations for building guidance and counseling image and public support	5
Total Percentage of Time	100%

Staff Development

A Staff Development Committee or its equivalent should have the responsibility for building staff competencies to use the chosen instructional/guidance strategies and activities. A staff needs assessment will probably be necessary. First, there is the need for the identification of those basic elements that would be applicable to all staff. Second, elements applicable to all members of a specified group (e.g. elementary teachers, school psychologists, school social workers, vocational educators, counselors) should be identified. San Diego County, California (1975) utilized a survey to identify competency needs to implement "career guidance" processes.

> All competencies are to be rated in this manner for the four types of school personnel, both in terms of involvement (importance) and in terms of the need for inservice training.
> In marking your responses, please note that C=Counselor, AD-Administrator, T=Teacher, and A=Counselor Aide (Paraprofessional)

Need for Inservice					Sample Competency	Relative Importance					
None	Little	Some	Much	Great		No opinion	None	Little	Some	Much	Great
AD-T		C		A	Ability to plan and implement a career day.		AD	T	C		A
1	2	3	4	5		0	1	2	3	4	5
None	Little	Some	Much	Great		No opinion	None	Little	Some	Much	Great
		A	AD	C-T	Knowledge of career education concepts.					A	C-T-AD
1	2	3	4	5		0	1	2	3	4	5

California Pilot Career Guidance Center
Career Competency Survey 1975
San Diego County, California

Finally, critical individualized staff needs should be specified. The staff development program should then be organized around these needs. The implementation of a staff development program is similar to any instructional program where evaluation based procedures are used. An outcomes-evaluation approach will help insure quality control in the operational phase. The following illustrates some isolated staff development items. Typically these items would be organized in a fashion to depict a total staff development program.

Goal: Pupils (K-6) will be able to communicate openly with others.

Teacher Competency Desired	Means Whereby Competency Can Be Met	Evaluation
To be able to provide activities that will lead to achieving interpersonal communication objectives.	Two pre-school workshops in August by consultants using kits (e.g., DUSO, FOCUS) and process (e.g., Bessell's magic circle). One workshop focused on K-3 and one on 4-6 levels. One paid Saturday morning every third month for follow up of implementation. The elementary school counselor will make monthly visits to those classrooms using the activities.	Consultant/ peer rating and teacher self evaluation. Teachers' need requests and post workshop reactions will aid counselor follow up.

Teacher Competency Desired	Means Whereby Competency Can Be Met	Evaluation
To be able to respond to unique needs of individual pupils and foster self worthwhileness.	A two-day in-service retreat where consultants and counselors will conduct human resource groups helping teachers to: a. identify and respect individual differences. b. give positive feedback for non-academic accomplishments. c. recognize affect (loneliness and frustration) through active listening.	Peer and self ratings in role playing and simulated situations.

Teacher Competency Desired	Means Whereby Competency Can Be Met	Evaluation
To be able to describe self as a variable in various classroom/peer teacher situations. Can relate school relationships to self understanding.	Two paid four hour Saturday workshops for each instructional level (K-2, 3-6, 7-9, 10-12) led by counselor. The "C" group model described by Dinkmeyer.	Informal counselor and peer teacher feedback. Self rating scale for counselor (optional).

Goal: Pupils (7-9) will be competent in decision making skills.

Teacher Competency Desired	Means Whereby Competency Can Be Met	Evaluation
To be able to teach decision making skills.	In a Saturday pre-school workshop, social studies teachers will become proficient in teaching decision making using the "Deciding Kit" as a basic resource.	An evaluation instrument questioning knowledge of critical elements. Peer ratings on a micro teaching situation.

Goal: Pupils (10-12) will be able to relate education to out-of-school needs and interests.

Counselor Competency Desired	Means Whereby Competency Can Be Met	Evaluation
To be able to conduct mini-courses for pupils in: a. study skills b. test taking c. vocational exploration d. money managing e. job application and placement	Counselors not proficient in group procedures and the teaching of specified skills should attend summer workshops and co-facilitate groups with experienced group leaders.	Mini-course check list. Experienced facilitation feedback on group process scale.

Prototype Testing

Each option under consideration for delivering a process objective should be projected as if it were to be actually implemented. Stating *who* will do *what* and *when* will clarify roles, identify resources and outline schedules of activities. It may be necessary to conduct field tests before embarking on programs that have many process unknowns or will eventually be a heavy investment on the total school system. Priority decisions may have to be faced again after examining the nature and scope of the various components. Whether the selected processes have been simulated (projected analysis) or have been rehearsed (field test) the outcome should be the development of a guide or manual that specifies the activities needed to achieve the process objectives. These activities should be referenced to the performance objectives originally stated.

Guidelines

Operational guidelines will be the major production resulting from the Structuring Stage activities. The operational aspects may be combined with the needs and goal statements featured in the Defining Stage to form a Curriculum Guide. Whether these basic elements are combined into a comprehensive guide or considered separately, the specific components that describe the intended PPS program activities should be stated explicitly. The objectives-process match should be described. This becomes the basis for implementation activities. The method-means analysis should have served as a point of departure for the production of the operational plan with such redesign as might have been suggested by the prototype evaluation.

Essentially the enabling aspects of the program should feature information that will describe *what* there is to be done, *how* it will be accomplished, and *by whom*. Programmatic themes often become organizers for a strategy or set of activities that represent a change or a special thrust. For example the VEG Program (Vocational Exploration Groups) might imply time allocations as well as relate to specified objectives and accompanying evaluation procedures. Process activities used by the functionaires will probably become the basic descriptors used in educational communication.

Special groups often require their own process guidelines. Project SUCCESS, Cobb County, Georgia (1971) used a "pupil type" approach to prescribe programmatic components for special groups. The following summary permits the identification of special treatment groups, the prescribed program(s), and the evaluative criteria. (Wellman, 1971)

Project SUCCESS
Cobb County School System
Marietta, Georgia

PUPIL TYPES	INDIVIDUAL PROGRAM PRESCRIPTIONS	PROGRAM TYPES	PROCESS & MATERIALS*	STATISTICAL OUTCOME	STAFF JUDGMENT
I.Average	A J L B J L	A.Linguistic Reading	See Exhibit A *	A.Project Population	
II.Slow Maturing Child	A C (D) E (F)(G) K B C (D) E (F)(G) K	B.Basal Reading		1.Descriptive 2.Experimental Control comparison	
III.Slow Learner	A C (D)(F)(G) K B C (D)(F)(G) K	C.Tutorial D.Oral Language Development		B.Outcome Studies	
IV.Environmentally Disadvantaged Child	A C (D)(E)(F)(G) L J A C (D)(E)(F)(G) L K B C (D)(E)(F)(G) L J B C (E)(L)(F)(G) L K	E.Developmental Grouping		1.Behavior Maturity Scales	
V.Accelerated Learner	A (G) I J or B (G) I J	F.Motor Perceptual Programs		2.Metropolitan Achievement Tests	
VI.Emotionally Disturbed Child	A (C)(D)(E)(F) G (L) J A (C)(D) E (F) G (L) K B (C)(D)(E)(F) G (L) J B (C)(D)(E)(F) G (L) K	G.Child & Family Depth Counseling H.EMR		3.Predictive-Criterion Relationships	
VII.Neurologically Handicapped Child	A C (D)(E) F G (L) J A C (D)(E) F G (L) K	I.Enrichment J.County Adopted Math Program		C.Process Related Comments	
VIII.Educable Mentally Retarded Child	H A C (D)(E)(F) G K B C (D)(E)(F) G K	K.Multi-Media Math Program L.Broadening of Basic Skills		D.Observations of Project Goal Attainment	

Evaluation Design

The design of the evaluation should be structured to give maximum opportunity to obtain answers to the evaluation questions. The validity of the answers obtained is to a large extent dependent upon the development of a good design that will permit relevant conclusions and inferences. Most comprehensive evaluations start with a number of questions and very often more than one design is needed to answer the questions. Different objectives may, likewise, require different designs to collect information appropriate to the specific objective. The quality of an evaluation design is determined by how well it fits what the evaluator wants to find out. There is no ideal design for all situations.

Evaluation conclusions, or judgments, are usually made by comparing observations with some predetermined standard. The evaluation standards may be classified as static or dynamic, and are directly related to the outcome criteria discussed in the section on defining. Static standards are fixed and the program or outcome observations are compared with the established standard, such as a counselor-pupil ratio standard, or a criterion referenced standard that 80% of the pupils will achieve a score of 25 on a specified test. Dynamic standards, on the other hand, are based upon measures of change, over a specified time, in program or outcome, such as a reduction in counselor-pupil ratio, or a change in pupil performance on a test.

The types of comparisons most frequently used in evaluation designs may be classified as follows:

1. *Program vs. standard* - comparison of specific program provisions or activities with specified professional standards, or with projected activities. (process evaluation)

2. *Consumer response vs. expected response* - comparison of consumer (staff and/or pupils) response to program with expected response. (process evaluation)

3. *Participants vs. control group* - comparison of program pupil group performance with non-program (control) pupil group performance. (outcome evaluation)

a. concurrent control group.
b. pre-program control group e.g. (pupils in the same grade the previous year, or pupils in the next highest grade at the beginning of the current year).
c. pupils in general (norm groups).

4. Participant gains vs. control gains - comparison of gains made by program pupils on criterion measures with gains made by a control group. (outcome evaluation)

5. Pretest vs. posttest - comparison of pretest with posttest performance of program pupils. (outcome evaluation)

6. Posttest vs. criterion standard - comparison of posttest performance of program pupils with a predetermined performance expectation or criterion referenced standard. (outcome evaluation)

7. Program activity I vs. program activity II - comparison of posttest performance and/or gains of pupils in two or more different types of program activities. (process/outcome evaluation)

Any one or a combination of these major types of comparisons can be employed to design an evaluation study. The decision questions of priority, the program objectives, and the basic hypotheses of the PPS program should be the prime considerations in selecting the types of comparisons that are needed. The kind of information needed and the kind of controls needed to make the information valid and meaningful are key considerations in choosing the comparison type to be used in the evaluation.

The evaluation design or plan should state explicitly: (1) The question being asked which is more often expressed in the form of an hypothesis; (2) The type of comparison(s) that will be used; (3) The subjects that will be included in evaluation, how they will be selected, and how they will be classified; and, (4) the kind of analyses that will be used to interpret the evaluation data. A design including these elements is desirable for either process or outcome evaluations, but is considered essential for meaningful outcome evaluation.

Formulation of Hypotheses

Hypotheses are declarative statements of the expected relationship between two variables. The two variables, in outcome evaluation, will usually be some specific activity in the PPS program (process) and a specific performance or characteristic of subjects (outcome). Additionally, the hypothesis may be delimited by specifying the situation and type of subjects where the hypothesized relationship between process and outcome is expected. The hypothesis should be testable, that is each variable should be measurable and operationally defined so that the results will clearly communicate the outcome. When all of these conditions have been met, then there is reasonable probability that the evaluative conclusions can be generalized for use in a variety of situations.

The systems model leads very logically into the formulation of hypotheses based upon stated outcome objectives and process strategies. In Step IV of the flow chart for the model the statement of the performance objective and outcome criteria really says "We can reasonably expect the pupil to perform in this manner." In Step V the specification of process objectives and strategies says that "We believe this process will facilitate the pupil performance stated in Step IV." When the two steps are put together (as explained in Chapter 3) the hypothesis emerges in that we have said that "When pupils have been subjected to this process they will perform in this manner." For example the objective for third grade pupils might be "The pupil will be able to demonstrate knowledge of occupations necessary for the production or distribution of goods and services in our community." The process strategy might be "an occupational exploration project using AV materials, field trips, and group discussion." When the objective (outcome variable) and the process strategy (process variable) are combined in a declarative statement of expectation the hypothesis might be that "Third grade pupils will gain in knowledge of community occupations as a function of occupational exploration activities." The process variable will have been defined operationally in the description of the process strategy. This description should specify in detail the procedures, resources, and time involved. The outcome variable can be defined in terms of performance on an occupational knowledge scale, such as the "Awareness of Community Helpers" (see Appendix A). Developed in this manner the hypothesis specifies the expected relationship between the two evaluative variables, and defines them so that the results of the hypothesis testing (the outcome evaluation) can be communicated in meaningful and practical terms.

The above illustration provides implicit suggestions for the type of evaluative comparisons that might be used. The term "gain" in the hypothesis can be translated as "positive change" in pupil knowledge. Therefore, the most direct comparison for measuring gain would be a pretest-posttest comparison within the target group. However, more confidence can be placed in the evaluation conclusion when the gains of the target group are compared with the gains of a control group. This is true because a gain measure within one group gives no concrete evidence that the program activity caused the change.

Most comprehensive evaluations of PPS programs include many activities and many corresponding hypotheses. An important point to remember is that the evaluation plan should include an appropriate design for testing each hypothesis. The same design may be suitable for several hypotheses, but more often several designs will be needed for a complete package.

Specification of Comparison Base

The comparisons that are inherent in, and essential to, a good evaluation design require that the comparison base (standard) be defined clearly. The evaluation results should permit statements of departure from, or relationship to, some baseline condition or fixed standard. The following examples illustrate comparison bases for the principal types of evaluation comparisons and possible evaluation statements that might be derived from the comparison.

Type 1. Program vs. standard (or projected activities) comparisons.

Examples of comparison bases:
(1) State Accreditation Standards.
(2) Annual Projected Activities.

Examples of evaluation Statements:
(1) The guidance resources of personnel, materials, and facilities in District 33 met or exceeded the State Standards for the 1973-74 school year.
(2) The guidance activities scheduled for the 1973-74 school year in District 33 were completed to the following extent:
    80% were fully completed on schedule.
    15% were partially completed or modified (process description).
    5% were not carried out due to budget restraints (process description).

Type 2. Consumer response vs. expected response comparisons.

Examples of comparison bases:
(1) Previous year pupil response.
(2) Previous year teacher response.

Examples of evaluation statements:

(1) The number of pupils seeking assistance from the counselor in 1973-74 increased by 28% over 1972-73.
(2) The number of teacher referrals to the counselor in 1973-74 decreased by 15% over 1972-73.

Type 3. Participants vs. control group comparisons.

When a control group is used as the comparison base, steps need to be taken to assure comparability with the participating group. Any good research methods book will give the minimum considerations and suggest acceptable procedures for determining comparability of groups. Technically, the proposition that the participating and control groups came from the same population needs to be defensible. The most frequently used procedures to assure comparability of groups include: (1) random assignment of subjects to the participating and control groups; (2) matching of subjects on relevant characteristics, such as, age, sex, ability levels, socio-economic status, etc.; (3) matching classes or schools that have comparable pupil groups; (4) drawing a sample of comparable pupils from a previous school year at the same school (where criterion data are available for such pupils; (5) using pretest data for the next highest grade as a comparison base for the posttest of the lower grade group, e.g. comparison of grade seven posttest with grade eight pretest in the same year; and (6) using a local, regional, or national norm group believed to be comparable to the program group and where comparable data are collected. These methods will not all meet the demands of rigorous research, but may be quite helpful to obtain rough estimates of outcomes and to generate hypotheses for more rigorously controlled studies. All control group based comparisons make the assumption that the control subjects have not been exposed to the program activities that are being evaluated. This condition should be maintained, without qualification, during the course of any evaluation using this design.

Examples of comparison bases:

(1) Performance of a randomly selected control group.
(2) Performance of pupils enrolled the previous school year.

Examples of evaluation statements:

(1) The end of year achievement level of the guidance study skills group was significantly higher than that of the control group.
(2) The drop-out rate of the senior high school pupils who participated in the occupational orientation program was significantly lower than that of the previous year students who did not participate in the program.

Type 4. Participant gains vs. control gains comparisons.

The control groups established for gains comparisons may follow essentially the same procedures outlined above for Type 3 comparisons. However, pretests and posttests used for gains measures should be given at approximately the same time to the two groups. This condition limits the use of control groups that are not in school concurrently with the participating group.

Examples of comparison bases:

(1) Gains made by nonprogram grade three pupils in task-oriented behaviors during the 1973-74 school year.
(2) Gains made during the 1973-74 school year by noncounseled 12th grade pupils in certainty level of vocational choice.

Examples of evaluation statements:

(1) Grade three pupils who participated in the guidance group made significantly greater gains in task oriented behaviors than did the nonparticipating control pupils.
(2) The gain in the certainty level of vocational choice was significantly greater for the counseled than for the noncounseled 12th grade pupils.

Type 5. Pretest vs. posttest comparisons.

Comparisons between pretest and posttest performances, without a control group, is a convenient design to estimate the gains made by program students over a specified time period. This design is, however, limited in providing evidence that the program caused the gains observed. A variation of this design can be the establishment of a predetermined gain standard (criterion referenced) for the group. That is, a statement of expectancy is made regarding the proportion of the group that will achieve a specified gain.

Examples of comparison bases:

(1) Pretest scores of grade one pupils on task oriented behaviors.

(2) Criterion standard of a six point gain for ninth grade pupils on the Vocational Knowledge Inventory.

Examples of evaluation statements:

(1) The grade one pupils who participated in the token reward program made significant gains in their task oriented behaviors during the 1973-74 school year.

(2) Sixty percent of the ninth grade pupils in the career-orientation class made gains of six points or more in their scores on the Vocational Knowledge Inventory.

Type 6. Posttest vs. criterion standard comparisons.

Comparisons between the posttest performance of participating subjects with a predetermined performance expectancy is often expedient in that the administration of only one test is required. However, the setting of a criterion standard for performance presents a problem. Such criterion referenced standards should be based upon experience. Answers to such questions as "What is a reasonable performance expectancy of pupils who have participated in an activity of this type?", or "How would pupils without exposure to the activity perform?" are helpful in establishing realistic standards where no normative data are available. One solution to this problem is to use pretest/posttest comparisons with at least one sizeable sample and then use the results to establish expectancy standards for subsequent groups. Care must be taken, however, to assure reasonable comparability of groups as would be the case in using any normative data. The criterion referenced comparisons have an additional advantage in that the required analysis of data is relatively simple, and an immediate answer to the achievement of the objective can be obtained without drawing inferences. On the other hand, the cause and effect relationship between process and outcome is more difficult to defend with criterion referenced comparisons than with control group comparisons. That is, a control group comparison will support the observation that the program caused the outcome while the criterion referenced comparison does not give assurance that the outcome might not have occurred as a result of some other factor, such as maturation.

Examples of comparison bases:

(1) Seventy-five percent of the grade five pupils will be able to name 10 or more service occupations.

(2) All high school graduates will be educationally or vocationally placed within three months of graduation.

Examples of evaluation statements:

(1) Eighty percent of the grade five pupils in the career guidance exploration program were able to name 10 or more service occupations, and 100% named six or more.

(2) Forty-six percent of the 1972-73 graduating seniors were placed in post high school education programs; forty-two percent were placed on jobs or were homemakers; and, twelve percent were unemployed or not available to provide information.

Type 7. Program activity I vs. program activity II comparisons.

The determination of the relative effectiveness of two or more PPS program activities in producing a specified outcome involves comparisons of the same outcomes among groups of participants in the different activities. Most of the outcome measures discussed above can be used in comparing program activities. Also, the outcomes of two or more participating groups can be compared with a control group to determine whether either or both program activities were effective (made a difference).

Examples of comparison bases:

(1) Certainty of vocational choice of 12th grade subjects in individual and group counseling.

(2) School achievement of 10th grade pupils in a study skills group, a desensitization group, and a control group.

Examples of evaluation statements:

(1) Twelfth grade subjects who had five individual vocational counseling sessions were less certain about their vocational choice than were comparable classmates who participated in a weekly group vocational counseling session during the first semester.

(2) Gains on a standardized achievement test were equal for 10th grade pupils in the study skills group and the desensitization group, and were greater for both participating groups than for the control group.

Identification of Participants

The selection of subjects for an evaluation study is a crucial consideration in answering evaluation questions and in being able to generalize the evaluation results to other situations. Evaluation conclusions and inferences are closely related to the size and nature of the sample of subjects used in the study, therefore these factors are important parts of the evaluation design. The technical requirements and limitations of sampling may be found in many sources that discuss educational research and will not be included in this presentation. Some of the practical considerations that may be helpful in formulating the design are discussed below.

Sample Classification. The sample classifications describe the subjects included in the evaluation. Pupil or subject variables are used to describe the sample and to differentiate subjects within a sample. The sample may have a single classification or multiple classifications depending upon the nature of the evaluation questions. Single classifications describe in general a single group from which the sample was drawn, such as a grade level group, one sex group, or one socio-economic group. Multiple classifications refer to sub-categories of subjects within a general group, such as samples of 12th grade boys and girls of high and low socio-economic status in programs X and Y. This multiple classification thus provides for eight subsamples within the general sample of 12th grade subjects and might be diagrammed as follows:

Sex	S-E	Program X	Program Y
Boys	H		
	L		
Girls	H		
	L		

An evaluation design that provides for the assessment of outcomes for relevant subsamples of pupils permits evaluation conclusions with respect to the differential effectiveness of the PPS process. When the evaluation questions inquire about the kind of pupils who benefit from a particular program activity this design is one of the most expeditious ways of obtaining the information needed to answer the questions.

Some of the more commonly used classifications of pupils into subsamples for PPS evaluations are based upon variables in the following general categories:[1]

Academic ability
Academic potential (aptitudes)
Academic performance (achievement)
Interests
Needs
Ethnic origin
Community structure
Socio-economic status
Geographic location
School characteristics (physical, staff, pupils, etc.)
Family characteristics

Sample Size. Practical considerations frequently necessitate the inclusion of only a few of the program pupils for evaluation purposes. This situation usually arises when large numbers of pupils are in the program being evaluated, or when the evaluation design requires the collection of extensive data. In either case the time and expense required for the evaluation can be reduced greatly by studying the outcomes for a sample of pupils rather than for all pupils in the program. Evaluation conclusions based on data from a representative sample are just as meaningful as conclusions based on data from all pupils in the program. There are, however, certain precautions that need to be observed to insure reasonable confidence that the sample is representative of the group from which it was drawn.

The size of the sample is one of the first considerations. How large does the sample need to be in order to generalize the evaluation outcomes to the total group or to other similar groups? There is no single answer to this question. In general the larger the sample the less the likelihood of error arising from differences between the characteristics of the sample and the total group. The size of the group from which the sample is drawn is another factor to be considered. If a 20% sample is drawn from a group of 10 subjects the error probability will be greater than with a 20% sample from 100 subjects.

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[1] A detailed discussion of student and situational variables that may be used to classify samples may be found in Contractor's Report, Phase I, National Study of Guidance, OEG 3-6-001147-1147, USOE/DHE, 1968, Part V.

The number of subgroup classifications included (see multiple classifications of sample above) is another consideration in sampling. In the example used above, if the subjects are classified by sex, socio-economic status, and type of program, then each subgroup in the sample needs to be proportionate to and representative of the subgroup classification for the total group. This procedure is referred to as stratified sampling in that the classification strata of the sample duplicate the known classification characteristics of the total group. That is, if the total group is 52% girls and 48% boys the sample should reflect the same proportion, and so on with each of the other sample classifications. To this extent then the sample is selected to match the total group with respect to the sample classifications. The greater the number of sample classifications of subjects, the larger the total sample will need to be to assure an adequate sample in each of the subgroups. Some evaluators suggest that each subgroup should include a sample of at least 10 subjects to reduce the error rate and in turn to decrease the probability of falsely accepting or rejecting evaluative hypotheses. If this rule of thumb is followed, it is easy to see that the larger the number of sample classifications the larger the total sample will need to be. For example, the multiple classification cited above includes eight subgroups and would require a minimum of 80 subjects in the total sample. On the other hand, a single classification sample might be adequate with only 10 or 20 subjects.

The selection of subjects for inclusion in a sample may be accomplished in a number of ways. Random selection of subjects from the total group or population is a preferred method when practical. Random selection and assignment of subjects reduces the possibility that variables other than the program may have influenced the outcomes. For example, the influence of teacher personality on the PPS outcome, should be equal in an experimental group and a control group if the experimental subjects are randomly selected. Likewise if a sample of 20 subjects is drawn randomly for evaluation study from 100 subjects, it can be assumed that the characteristics of the sample will typify the total group, and that the influence of uncontrolled variables will be no different for the sample than for the total group. The use of random numbers is a common method used to select random samples, however any method is satisfactory that assures equal opportunity for any possible sample (combination of the specified number of subjects in the sample) to be selected. The method of combining (1) matched subjects on classification variables with (2) the random selection of subjects within classifications may be a desirable method in multiple classification designs. Reasonable randomness can be assumed by using such methods as drawing pupil numbers from a fish bowl, or by drawing every fifth pupil (or any other percentage desired) from an alphabetical roster of all pupils within a classification. The basic principle to follow is that each pupil have equal opportunity to be drawn in the sample with every other pupil in the total group being sampled.

Most PPS evaluations use pupils as the sampling unit, however some studies may involve classes, schools, or specific counselor or pupil behaviors as the sampling units. In such cases it is necessary to define the total of the units to be sampled and then proceed in the same manner as when individual pupils were the sampling unit. Care should always be taken to reduce the possibility of sampling bias and the larger the sampling unit the more difficult it may be to obtain an unbiased sample. For example, take the case of a school district that has 40 elementary schools and a 10% sample, or four schools, are to be chosen for evaluation of the PPS program. The equivalence of the sample to the other 36 schools will need to be established on the basis of such criteria as characteristics of the pupils, ethnic composition of the attendance area, and the economic status of families in the area served by the school. This sampling procedure requires a detailed description of each of the 40 attendance areas, including school characteristics, so that the sample selected will be representative of the total district. However, if generalization of the evaluation results to the entire district is not desired, then evaluation may be conducted in only one school that may have unique characteristics, such as an inner city school serving a low socio-economic population that has ethnic imbalance.

In summary, sampling procedures will enable large scale evaluations that would not otherwise be economically feasible, and the value of the evaluation results from a well drawn sample are just as meaningful as for a total group. Adequate sampling, however requires meticulous attention to relevant variables and rigorous adherence to the chosen sampling procedure.

Determination of Analysis Procedures.

The evaluation design should specify the type of data analysis that will be used to provide appropriate information to answer the evaluation questions or to test the evaluative hypotheses. The major concerns in determining analysis procedures are to select an analysis that is appropriate for (1) the data, and (2) the evaluation questions. Evaluation of PPS programs generally do not meet the rigorous demands of scientific experimentation, and therefore seldom justify the use of highly sophisticated statistical procedures. On the other hand, most evaluation information can and should be quantified for purposes of analysis and interpretation. (The reduction of subjective evaluative judgments, or observations, to numerical values is discussed in other sections dealing with instrumentation.)

The nature of the data and the appropriate type of analysis procedure are closely related to the evaluation questions and the type of evaluation comparison selected to answer the questions (see discussion of comparison bases). Evaluation analyses always begin with descriptive data that are used for the evaluative comparisons. The comparisons seek to establish likenesses or differences that are relevant to the comparison base selected for the evaluation design. These comparisons can range from nonstatistical observations (eyeballing) to highly sophisticated multivariant statistical procedures. The chart below is an attempt to help the reader see the relationship between the comparison type selected for the evaluation and the analysis procedure. The analyses indicated have many variations that might be used with different designs. The reader who is not acquainted with the statistical procedures noted may find theoretical and procedural discussions of each of these procedures in any good elementary statistics book written for the fields of education and psychology.

Analysis Procedures for Different Comparison Designs

Comparison Type 1/	Descriptive statistics, frequency counts, mean, median, percentages, & variance	Independent t Test	Dependent t Test	Non parametric procedures e.g. chi square	Analysis of Variance	Correlational Methods
1. Program vs. standards	X					
2. Consumer response vs. expected response	X			X		
3. Participants vs. control group	X	X			X	X
4. Participant gains vs. control gains	X		X		X	X
5. Pretest vs. posttest	X		X		X	X
6. Posttest vs. criterion standard	X			X		
7. Program activity I vs. program activity II	X	X		X	X	

1/ See discussion of comparison bases

Finally, the evaluation design should specify the confidence level that will be accepted to determine the significance of the evaluation results. Statistical significance is usually set at the .05 level for comparisons of multiple group outcomes or pretest-posttest analyses. The establishment of confidence levels is a safeguard against falsely interpreting chance differences as true differences, and is a standard statistical requirement when sampling has been employed in the design. Also, the design should specify the proportion of multiple objectives that need to be achieved to conclude that the related goal has been achieved. Sample design worksheets are presented in Appendix A to assist the reader in organizing the essentials of the evaluation design for an objective.

Evaluation Structuring

The procedural plan for the implementation of the evaluation design may be described as those provisions or steps necessary to collect, organize, and analyze evaluation information or data. These provisions include (1) instrumentation for the collection and quantification of evaluation information, (2)scheduling the collection of data, (3) staffing for the collection and processing of data, and (4) budgeting for the evaluation. These considerations are discussed below from a practical point of view to alert the evaluator to the major points in structuring the implementation procedures.

Instrumentation

Instruments for the collection of evaluation information should be selected or developed to provide a measure of each objective in terms of the corresponding expected outcome or evaluation hypothesis. This involves the measurement of process and outcome variables directly related to the stated objective (see evaluation design section). Ideally, the measurement should be a direct measure of the expected outcome with minimal inference. For example, a frequency count of a specific behavior is a more direct measure than is the measurement of attitudes by inferences made from responses on a paper and pencil scale. Obviously all PPS objectives cannot be measured directly, but the less the distance between the individual characteristic (variable) and the measurement (variable description) the greater the confidence that the measurement is an accurate estimate of the variables stated in the objective. In a sense this is one way to look at the validity of an instrument for evaluation purposes. That is, the instrument may have face validity to the extent that it is a direct measure of the variables stated in the outcome (or process) objective.

Instruments for evaluation may be viewed as techniques that provide systematic and organized means for collecting and recording information so that it can be interpreted objectively. Information relevant to PPS objectives can usually be obtained from observers of the subject, and from self-reports or performance of the subject. Observers in outcome evaluation are usually counselors, teachers, peers, or others in a position to observe the behavior of the subject. Observers in process evaluation are most often consumers (pupils & teachers), staff participants (counselors, teacher, etc.), administrators, or the public (parents, employers, etc.). Self reports and performance of the subject are ordinarily obtained directly from the subject and may vary from verbal communication in an interview to standardized performance tests. The instruments employed should always be appropriate for the respondent's ability and opportunity to provide the desired information. For example, the instrument should provide instructions and use language that the respondent can understand so that misinterpretations of the instrument will be minimized. Also, the content should be consistent with (1) the respondent's opportunity to observe the situation or conditions about which inquiry is being made; and/or (2) the respondent's level of development in the case of the measurement of such traits as attitudes, abilities, and interests.

The instrumentation for the collection of many types of evaluation data may be available in the regular school program. School records of attendance, behavior, academic achievement (teacher grades), special achievements, participation in school activities, educational and vocational plans, etc. are usually accessible to the evaluation staff. Also, most schools have a testing program that provides periodic assessment of abilities, achievement, personality, attitudes, and interests. Information from these sources, when collected appropriately and at the desired time, may be quite relevant to the evaluation and used without special instrumentation for the evaluation. Special caution should be exercised in using existing instrumentation or readily available information to assure relevance to the evaluation design. The evaluation should not be designed to fit existing instrumentation and data, but available information should be used any time it satisfies the information needs of the evaluation.

Many PPS objectives relate to content areas and behavioral specificity that cannot be measured adequately from data readily available to the evaluation staff. In these cases additional instruments need to be selected or developed to meet the specific needs of the evaluation. The uniqueness of evaluation designs to the local program precludes the development of a package of evaluation instruments that would be transportable to large numbers of programs. To do so would violate the principle of selecting instruments to fit the design rather than developing a design to fit the instruments. Many instruments developed to collect evaluation information will therefore be research instruments that have not been as thoroughly tested and standardized as most published instruments. The user of such preliminary instruments should always be cautious with respect to (1) validity, (2) reliability, (3) feasibility, and (4) interpretation of results.

The following chart outlines some of the most frequently used information sources and classes of instruments related to the major categories of PPS objectives. This chart should be used only as a suggestive guide, and should in no way limit the use of other sources or instruments.

Nature of Information *	Possible Sources	Classes of Instrumentation
Perceptualization Environmental Awareness Self Awareness	Pupil Teacher Counselor Psychologist Social Worker	Self reports: Inventories Interviews Q-sorts Tests Observer's reports: Rating scales Behavior descriptions Counselor reports
Conceptualization Directional Tendencies (interests, attitudes, values, plans, etc.) Adaptive and Adjustive Behaviors	Pupil Teacher Counselor Psychologist Social Worker Peers Parents	Self reports: Inventories Interviews Questionnaires Tests Q-sorts Observer's reports: School records Activity records Socio-metrics Behavior descriptions
Generalization Accomodation Satisfaction Mastery	Pupil Teacher Counselor Psychologist Social Worker Employer Other Institutions	Self reports: Tests Follow-up questionnaires Interviews Observers reports: School records Employment records Social records

* See Taxonomy structure in Chapter 3.

The following guidelines are useful in the selection and/or development of instruments for the collection of evaluation information.

1. The expected outcome for each objective should be measured as directly as possible.
2. The instruments for collecting evaluation data should be appropriate for the intended respondent in terms of content, understandability, opportunity to respond, and mechanical simplicity.
3. Directions for the administration, scoring, and reporting for all instruments should be clear, concise, and complete to insure uniformity and accuracy in data collection.
4. The time required for the administration, scoring, and reporting of evaluation instruments should be kept at the minimum to obtain reliable information.
5. Evaluation instruments should meet the tests of validity for the objective, reliability in producing consistent results, and feasibility for the operational situation.

Scheduling Data Collection

The data collection schedule for a comprehensive evaluation should be set up prior to the initial date of the evaluation period and should specify: (1) the objective for which data are to be collected; (2) the instrument(s) or method(s) to be used; (3) the group(s) or individuals from whom data will be collected; (4) the time when data will be collected (pretest, posttest, end-of-year, etc.) in relation to the process schedule; and (5) the person(s) to be responsible for the collection of the data. The evaluation design, including the types of comparisons to be made, will dictate most of the decisions relevant to the data collection schedule.

Evaluation data collected for groups to make pretest-posttest comparisons or experimental - control group comparisons need to conform closely to a time schedule related to the process period. Pretest or baseline data need to be collected prior to the initiation of the process activities, and posttest data need to be collected at a specified time after the completion of the process being evaluated. Some designs may also require the collection of data at specified periods during the process period or as follow-up some time after the completion of the process. All such data need to be collected on a predetermined schedule so that all persons involved in the evaluation can make plans and carry out the data collection in accordance with the design.

The completion of the objective work sheet (Appendix A) for each objective will provide the information for making a data collection summary chart. The data collection schedule for the evaluation of a career education project at Hazelwood, Missouri, as shown below, illustrates how the details of information collecting can be summarized for the use of those responsible for implementation. This chart is followed by the data collection schedule for the Crisp and Liberty Counties, Georgia evaluation of their Career Education projects. Either method provides a good summary of the information collecting requirements to meet the evaluation design.

Data Collection Schedule and Instrumentation for Project CETE

Hazelwood, Missouri - 73-74

GOAL & OBJECTIVE	GRADE ONE	GRADE TWO	GRADE THREE	GRADE FOUR	GRADE FIVE	GRADE SIX
GOAL ONE						
01.1.A	POAI-1(PP)					
01.1.B	SOAI-(PP)					
01.1.C	PSJCI-(PP)					
01.1-3	OL-(PP)	OL-(PP)	OL-(PP)			
01.2.A		HSI-(PP)				
01.2.B		PSI-(PP)				
01.3.A			CMI-(PP)			
01.3.B			HRI-(PP)			
01.3.C			COAI-(PP)			
01.3.D			POAI-2(PP)			
GOAL TWO						
02.4A				JSD-1(PP)		
02.4B				JSD-2(PP)		
02.5A					JSD-3(PP)	
02.6A						OSD-1(PP)
02.6B						OSD-2(PP)
02.6C						WA-(PP)
GOAL FOUR						
04.1-3.A	DP-(PP)	DP-(PP)	DP-(PP)			
04.4-5.A				IPC-(CR)	IPC-(CR)	
04.6.A						ISOC-(CR)
TOTAL MEASURES	5Pretest 5Posttest	4Pretest 4Posttest	6Pretest 6Posttest	2Pretest 3Posttest	1Pretest 2Posttest	3Pretest 4Posttest

LEGEND:
(PP)=Pre and posttest
(CR)=Criterion referenced
POAI=Parents Occ. Awareness Inv.
SOAI=School Occ. Awareness Inv.
PSJCI=Public Ser. Job Cluster Inv.
OL=Occupational Listing
HSI=Health Ser. Inv.
PSI=Personal Ser. Inv.
CMI=Communication-Media Inv.
HRI=Hospitality & Rec. Inv.
COAI=Com. Occ. Awareness Inv.
JSD=Job Sim. & Diff.
OSD=Occ. Sim. & Diff.
WA=Work Awareness
DP=Describing People
IPC=Inv. of Personal Char.
ISOC=Inv. of Self & Occ. Char.

Crisp and Liberty Counties Evaluation

DATA COLLECTING SCHEDULE 1973-1974

Grade	Pretest	Posttest
K	Describing People Home School Awareness Decisions in Everyday Life	Describing People Home School Awareness Decisions in Everyday Life Behavior Maturity Scale-Academic Factor Home Tasks Survey
1	Describing People Home School Awareness Occupation Naming Decisions in Everyday Life	Describing People Home School Awareness Occupation Naming Decisions in Everyday Life Basic Studies and Occ. Behavior Maturity Scale-Academic Factor Home Tasks Survey
2	Describing People Occupation Naming Awareness of Community Helpers Decisions in Everyday Life	Describing People Occupation Naming Awareness of Community Helpers Decisions in Everyday Life Basic Studies and Occ. Behavior Maturity Scale-Academic Factor Home Tasks Survey
3	Describing People Occupation Naming Awareness of Community Helpers Decisions in Everyday Life	Describing People Occupation Naming Awareness of Community Helpers Decisions in Everyday Life Basic Studies and Occ. Behavior Maturity Scale-Academic Factor Home Tasks Survey
4	Work Awareness Scale	Work Awareness Scale Inventory of Personal Characteristics Everday Decision Making Basic Studies and Occ. Employability Characteristics

Grade	Pretest	Posttest
5	Work Awareness Scale	Work Awareness Scale Inventory of Personal Characteristics Everyday Decision Making Basic Studies and Occ. Employability Characteristics
6	Work Stories Test School Sentiment Index	Work Stories Test School Sentiment Index Everyday Decision Making Basic Studies and Occ. Employability Characteristics Inventory of Self and Occ. Characteristics
7	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory
8	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory
9	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory	Choose a Job Inventory PECE Knowledge Test Work Stories Test Career Development Inventory
10	Vocational Knowledge Inv. Survey of Educ. and Career Plans	Vocational Knowledge Inv. Survey of Educ. and Career Plans My Interests and Aptitudes
11	Vocational Knowledge Inv. Survey of Educ. and Career Plans	Vocational Knowledge Inv. Survey of Educ. and Career Plans My Interests and Aptitudes
12	Vocational Knowledge Inv. Survey of Educ. and Career Plans	Vocational Knowledge Inv. Survey of Educ. and Career Plans My Interests and Aptitudes

Staffing for Data Collection and Processing

Adequate staffing to handle the evaluation, including data collection and data processing, is an absolute essential for a successful evaluation. Adequate staffing should provide for personnel to (1) plan and coordinate data collection and processing; (2) conduct in-service training of teachers or others who will be responsible for the actual data collection; (3) administer the information collecting instruments; (4) handle the clerical details of preparing and distributing instruments, collecting and organizing completed instruments, scoring and coding data for processing, punching data cards, preparing tables, and preparing evaluation reports; and (5) write and interpret evaluation reports.

The absence of adequate staffing for an evaluation is frequently the underlying cause for the breakdown of the whole evaluation process. Symptoms of inadequate staffing may appear in the form of (1) unmet schedules, (2) resistance from teachers, (3) errors in data processing, and (4) incomplete reports that are not communicated adequately to program and administrative personnel.

The staffing needed for evaluation cannot be standardized due to the differences in the nature and size of evaluation projects from school to school. Staffing to conduct a full scale program evaluation for all grades in a large school system will obviously require more leadership and more man hours than will the evaluation of one specific activity in one grade. In any case, large or small, comprehensive or specific, the success of an evaluation is dependent upon the assignment of specific time to competent staff for the planning, implementation, and interpretation of the project.

Budgeting for Evaluation

The fiscal budget for conducting an evaluation should be established as a part of the overall budget for a program, just as other program activities. The budget should be structured to meet the anticipated and estimated costs of specific items needed for all phases of the evaluation. Most state and federal funded PPS programs now require the inclusion of evaluation as a line item in project budgets. The following outline includes those items often found in a budget for a comprehensive program evaluation:

I. Personnel
  1. Professional (coordinator, program personnel with evaluation responsibilities, etc.)
  2. Clerical and technical (stenographers, clerks, programmers, etc.)
  3. Allowances for released time (pay for teachers, counselors, and others to attend evaluation workshops, etc.)
  4. Consultants

II. Supplies and Materials
  1. Professional materials (books, manuals, evaluation reports, etc.)
  2. Data collection materials (tests, questionnaires, data cards, etc.)
  3. Duplication costs (forms, reports, etc.)
  4. Office supplies

III. Processing
  1. Test scoring
  2. Coding and key punching
  3. Computer time

IV. Travel (local, project visitations, in-service, consultants, etc.)

V. Sub-contracts (instrument development, design, processing, in-service, etc.)

The cost of an evaluation can be estimated by pricing out the above items (plus equipment if needed). The number of pupils or other respondents and the number of measures taken are major variable factors in the evaluation cost. These variables have a direct bearing on personnel, processing and materials costs. The proportion of a program budget that is allocated to evaluation will vary with the comprehensiveness of the evaluation, the availability of local personnel and facilities, and the period of time covered in the evaluation. The figure of 10% of the program operations budget is sometimes used to get a rough estimate of reasonable evaluation costs. This approach may be helpful in preparing overall general budget estimates, but is not adequate for developing a meaningful operating budget. There is no shortcut to detailed planning and specific item pricing in building an accurate and adequate budget.

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Chapter 7

The Implementing Stage

Process Implementation

Questions to be Asked

This phase of the decision making process centers on the extent to which planners and implementers are able to attain the process objectives. Are the instructional and PPS staffs able to deliver what they intended in the settings (classrooms, work places, resource centers, etc.) where the programs were to be implemented? Are the pupils in these settings meeting the standards of performance expected as they participate in the activities? In most instances building principals and their staff will be responsible for monitoring the on-going activities and collecting data relative to these and other process questions such as:

Are the processes sufficient to achieve the specified objectives?

What procedures are actually being used to deliver each process?

Are there special groups with different objectives?

What time frame is needed to reach each objective?

Is there an attitude fostering quality control?

Is the staff making effective use of facilities, equipment and materials?

Are the parents/community responding as anticipated?

Are there events taking place that were not expected?

Procedures to be Used

Proper management of the Structuring Stage will facilitate a smooth installation of program processes. The outputs of the Structuring Stage are the inputs of the Implementation Stage. Process dimensions crucial to the implementation of programs should be stated operationally. Planned staff development sessions, a calendar of activities, facilities and equipment usage schedule, procedures and provisions for recording pupil data and evaluative data, special population components, public communication and relations plans, back up contingency methods, and budgetary items directly related to program operations should all be available for the review of the PPS staff and the school administration.

The pupil outcome evaluation should be described operationally. It should be designed with responsibilities, schedules, and analyses specified. The following shows (1) a chart of a career development oriented evaluation plan and (2) a portion of the evaluation description. See Appendix C for a more complete operational reference.

EVALUATION INSTRUMENTATION BY GOAL AND GRADE GROUP FOR A CAREER EDUCATION PROJECT

	1.0 Self	2.0 Career	3.0 Decision	4.0 Preparations	5.0 Placement
K-3	Describing People (K-3)	Home School Awareness (K-1) Occupational Naming (1-3) Awareness of Community Helpers (2-3)	Decisions in Everyday Life (K-3)	Basic Studies and Occ. (K-3) BMS - Academic Factor (K-3) Home Tasks Survey (K-3)	None
4-6	Personal Characteristics (4-5) Self and Occupational Characteristics (6)	Fulton-Work Awareness Scale (4-5) Picture Inventory of Occ. Knowledge (6)	Everyday Decision Making (4-6)	Basic Studies and Occ. (4-6) Employability Characteristics (4-6) School Sentiment Index (6)	None
7-9	Choose A Job Inventory (7-9)	PECE Knowledge Test (7-9) Fulton-Work Stories Test (7-9)	Super-Career Development Inv. (7-9)	PECE Knowledge Test (Matching section only) (7-9)	School Leaver Record (7-9)
10-12	UMC - Interests and Aptitudes (10-12)	Vocational Knowledge Inv. (10-12)	UMC - Survey of Educ. and Career Plans (10-12)	UMC - Survey of Educ. and Career Plans (10-12)	School Leaver Record (10-12)

Decision Making

Goal 3.0 To develop career decision-making knowledge and skills.

This goal is for the pupil to recognize the importance of the relationships between self and environmental variables in making career decisions; and to utilize this knowledge in developing his own career plans. The goal will be achieved as the pupil progresses in making career decisions appropriate to his maturity.

Objective 3.1 (K-3) The pupil will recognize the importance of making decisions in everyday life.

Process: (1) Pupils will develop a series of decision charts which depict decisions made during various time segments.

(2) After planning classroom activities, the pupils will identify influences upon their decisions. They will discuss those decisions which were most difficult to make.

(3) Working in small groups (3-6 pupils), the pupils will identify alternative ways of accomplishing a specific task and discuss the reasons for selecting the alternatives.

Outcome Expectancy: (1) The pupil will be able to name things that require or give him an opportunity to make choices (clothes, food, friends, play activities, play time, T.V. programs, etc.).

(2) The pupil will be able to name types of choices or decisions that his parents make which make a difference in the family life (vacation, work, groceries, movies, house, clothes, car, etc.).

Instrument(s): DECISIONS IN EVERYDAY LIFE UMC

A teacher report form - examples of acceptable responses provided - score on total points and criterion standard.

Data Collection: Teacher interview and report - pre and post.

Analysis: (1) Analysis of pre-post gain on total score.

(2) Analysis of difference in pre-post percentage of pupils reaching criterion for grade level: criterion for each task - K=3; 1=5; 2=8; 3=10; criterion for total - K=5; 1=8; 2=12; 3=15.

Objective 3.2 (4-6) The pupil will be able to describe the elements which make up the decision making process.

Process: (1) Small groups (3-6) will plan a typical week in a hypothetical pupil's life. This life style plan will include class time, leisure activity, interaction with others, and daily responsibility. Each group will plan a graphic presentation of their pupil's week, explaining how they used the decision making process in their group experience.

(2) Utilize FOCUS: Responding to explore pupil ideas about themselves, others and their environment. There are nineteen units dealing with such topics as feelings, family and peer relationships, problem solving and the world of work.

Outcome Expectancy: The pupils will be able to identify decision making activities which occur in the school setting, the world of work, and their life planning.

Instrument(s): EVERYDAY DECISION MAKING UMC

Data Collection: Teacher interview and report (end of year).

Analysis: Percentage of pupils attaining criterion standard:
(1) 75% of 4th grade pupils will score 60% or 15 out of 25.
(2) 75% of 5th grade pupils will score 72% or 18 out of 25.
(3) 75% of 6th grade pupils will score 80% or 20 out of 25.

Objective 3.3 (7-9) The pupil will demonstrate the ability to analyze, synthesize, draw conclusions, and secure information from a wide variety of sources in making decisions.

Process: (1) Simulation of future and present decision making situations will be a primary vehicle. Through group work individuals will be able to compare the way they make decisions with the way peers and adults make decisions.

(2) Deciding published by College Entrance Examination Board will be used to help pupils learn more about themselves and about a systematic process for making decisions. Also will use J.C. Penney's Career Decisions kit.

Outcome Expectancy: The pupils will show increases in (a) career planning orientation, (b) resources for career exploration, and (c) career information and decision making, as measured on the three scales of the CDI.

Instrument(s): CAREER DEVELOPMENT INVENTORY (CDI) - Super

Data Collection: Group administration of inventory pre and post.

Analysis: Analysis over grade and sex groups for pre-post change in scores on scales A, B, and C of the CDI.

Objective 3.4 (10-12) The pupil will be able to apply the decision making process to a series of decisions and commitments in the development of a career plan.

Process: (1) The pupil will assume the role of his career choice. Each individual will project themselves into the world of work. He will simulate the worker in terms of interests, personality characteristics, aptitudes, training requirements, employment opportunities and job entry procedures.

(2) Pupils will participate in Career Exploration Groups. Some experiences that may be included are the sharing of vocational histories, values clarification exercises, Self Directed Search (Holland) information, fantasy exercises, and the writing of commitment statements.

Outcome(s): (1) The pupil will make educational and career commitments that express his long range aspirations and realistic shorter range plans.

(2) The pupil will develop increased congruence between his (a) educational and career ideals, and (b) realistic plans.

(3) The degree of certainty about educational and career plans will increase.

Instrument(s): SURVEY OF EDUCATIONAL AND CAREER PLANS (SECP) UMC

Data Collection: Group administration pre and post.

Analysis: (1) Pre-post comparison of percentage of pupils who express firm educational and vocational plans.

(2) Pre-post comparison of percentage of pupils whose ideal and realistic choices agree.

(3) Pre-post comparison of number of pupils who are (a) quite certain, (b) indefinite, and (c) quite uncertain about their educational and career choices.

Cross Reference: See Objective 4.5 for additional criteria.

As pupil outcome data is examined at a later date, it will be important to know what was done to whom and under what circumstances. Provisions must be made to collect such information on a systematic basis. Often provisions for pre-testing and post-testing of pupil outcomes obscures the importance of this evaluation component. Too often such questions are dealt with in retrospect. The following outline lists some of the content items and procedures for preparing a systematic process description.

Description of Activities

Major Strategy/Component (examples only)

- programmed materials
- units
- special personnel
- individualized planning
- exploratory activities
- group counseling

Procedures

- written description of activity
- yes-no activities checklist
- description of conditions and standards
- yes-no standards checklist

Staff/Resource Records

Needs

- budgeting
- time utilization
- staff responsibilities

Procedures

- staff-process log
- resource-process log
- time-process log
- community utilization log
- parent utilization log

Quality Control

Needs

- standards
- side effects
    - pupil
    - staff

Procedures

- yes-no checklist
- teacher attitude by rating/interview
- pupil attitude by rating/interview

Process descriptors are needed to furnish program planners with information for various purposes.

1. Verification - Gathering process descriptions of the implemented program is needed to verify that the program was installed in keeping with the intent and standards of the program plan.

2. Replication - Process descriptions are needed to replicate the program in another setting.

3. Transportability - Critical elements to be considered for transporting the process or program can be noted.

4. Formative Change - Formative evaluation may dictate changes in the process; also, a history of the events and a justification for changes may be helpful to others.

5. Cost Benefits - Judgments can be more sensitive if good process descriptions include (a) time allocations, (b) sequences of events, (c) intervener's roles, (d) resources utilized, (e) unique contingencies, (f) comment on the social climate, and (g) other significant transactions.

Monitoring procedures are an important aspect of any program implementation process. Questioning whether the program is achieving the enabling objectives allows for minor adjustments and the support of various processes or a phase out/feedback decision on nonproductive elements. The attention and communication involved with staff in the monitoring activities provides a readiness for "side effect" evaluation at a later date. The logging of unanticipated events may disclose something of significance in later analysis and these events may be "programmed out" (debugged) when the program is installed in another setting. The interview or questionnaire technique can be used with counselors, psychologists, teachers, and other staff members to obtain answers to critical questions about the process operation. The following outline may serve as a checklist for this type of information collecting:

Progress and Reaction Report

Brief Interview/Short Answer Report

Objective______________________ Grade____________________

Implementation Dates___________ Teacher__________________

1. Strategy - What did you do?
2. Student Involvement - What did they do?
3. Student Reactions - How did they react?
4. Successes - Or best part?
5. Greatest Difficulty - Changes?
6. Unanticipated Effects - Discovery?
7. Evaluation - Did it work?
8. Resources - Used or desired?

GO___________________ NO GO___________________ CHANGE__________

Collecting and recording data in terms of specific pupils is an important part of evaluation for both process and product (outcome) purposes. "What and how much was done to whom?" Evaluation designs that are concerned with control variables and differential analyses will especially benefit from these data. Field studies that are based on a limited number of pupils and therefore may be effected greatly by individual pupil behavior may require in-depth learner - process - outcome data. Cost-effectiveness analysis utilizing detailed data reports would benefit from similar data. Since recording individual pupil data may be costly, purposes and techniques often require considerable study. It is probably more feasible to group pupils by grade, course, school or some other group designation. (See sample classification discussion in Chapter 6).

A possible format for reporting grouped participants by treatment (process) follows:

Objective - Treatment - Participant Table

Goal Area/Level	Objective	Treatments	Staff	Participants
Career Knowledge 2.0 Elementary Schools	2.1 2.4	Curriculum Infusion	Teachers	Grades 4, 5, & 6 Russell, Lee, & Grant Schools
	2.2 2.6	Field Trips	Teachers Counselor	Grade 5 Russell School
	2.2 2.3	Role Models	Counselor	Grades 1-6 Russell, Lee, & Grant Schools
	2.4	Career Kits	Teacher	Grade 6 Lee School
Career Knowledge 2.0 Middle School	2.1 2.2	Exploration Groups	Teacher Counselor	Grade 8 Soc. Stud. Jeff. Jr. High
Career Knowledge 2.0 High School				

An Activities Summary from Liberty County, Georgia, is shown in Appendix C. The following are some selections from such a report:

ACTIVITIES SUMMARY

Grade/Group	Major Activity	Objective	Time Line
Primary EMK	Unit entitled: "The Supermarket"	2.1 4.1 4.3	3 weeks
Grade 2	Units entitled: "The Post Office"	1.1 2.1 3.1 4.2	6 weeks
	"Dairy Foods"	1.1 2.1 3.1 4.2	4 weeks
	Played game: "What's My Line"	1.1 3.1	½ hr. periods 5 times during the year
Grade 7	P.E.C.E. course taught:		
	a. tours of business and professional community	1.3 2.3 3.3 4.5	1 hr. visits 6 times per student
	b. hands-on experience in the community	1.3 2.3 3.3	2 hr. visits 4 times per student
	c. small group discussions on work expectations	1.3 2.3 2.4	10 hrs. per quarter

The Andrews Texas schools use a form that is designed to show a continuous flow of processes. Process squares are listed under each objective/goal area.

a. The process square is left blank if the process has not been implemented.

b. The process square is marked with diagonal slash marks if the process is currently being done, but is to be completed at a later date.

c. The process square is filled in completely and appears solid if the process has been completed.

d. The process percent of proficiency is available as shown by the portion of solid and blank spaces.

This approach attempts to monitor and record standards of performance at the same time.

Counselors and other specialists are frequently asked to maintain daily logs. Information often recorded includes:

1. Contacts
    - Who was involved?
    - How long did it take?
    - What type of interaction?
    - Why did you do it?
    - What were the results?
2. Outcomes Checklist
    - Area/objective?
    - Direct or indirect?
    - Activity/process utilized - also number?
3. Support Services
    - Clerical - administrative tasks?
    - Meetings?
    - Professional growth?
    - Materials development?
    - Planning?
    - Travel?

See Appendix C for log samples.

In summary, adequate process monitoring and descriptors are crucial inputs for making administrative and program decisions, and for interpreting the outcome evaluation of the process. Such process information can be collected using objective techniques, observer reports, and subjective reports of the participants. Although this information relates directly to the process and operational details, it cannot be considered as something separate and apart from the evaluation implementation discussed below.

Evaluation Implementation

The major task of implementing the evaluation plan is to collect and analyze the evaluation data with minimum disruption to the ongoing PPS program and the rest of the school activities. The necessity to comply with data collection schedules and to collect comprehensive data from large numbers of pupils requires time and effort from all parties. The following discussion addresses the task of implementing the evaluation design so that the possibility of data errors can be reduced.

Collection of Outcome and Process Data

The outcome data must be collected in accordance with the data collection schedule and with proper administration of the evaluation instruments. This process requires careful planning and full cooperation of all persons responsible for collecting or providing the needed information. The following suggestions may be helpful in implementing efficient and accurate data collection.

1. The purposes and details of the evaluation plan should be communicated to all staff members who will be involved in the evaluation process. The threat of evaluation and the added burden of another task can be eased by a full explanation and discussion of all details for implementation before assignments are received by teachers, counselors, and others. Workshops can be used to discuss the data collection schedule, and the instruments to be used. A good technique to acquaint teachers and counselors with the evaluation instruments is to let them complete all of the instruments that they will administer. Emphasis should be given to instructions for the administration of all instruments and the necessity for uniform administration for all respondents. Also, where observers are to be used, it is important that they have had thorough training in making and recording their observations.

2. All instruments and evaluation instructions should be prepared and assembled well in advance of the date for implementing the data collection. Careful planning of the logistics of collecting and processing evaluation data will help in avoiding delays and in assuring compliance with the data collection schedule.

3. All respondents (pupils, teachers, parents, etc.) to requests for evaluation information should be informed

of the purposes for the information, and confidentiality should be assured where appropriate. Steps should be taken to motivate pupils to the task of completing tests or other instruments as would be done in any other school testing situation. The assumption is made that the responses to evaluation instruments represent the respondent's best efforts and/or an honest response. Any steps, within defined limits, that can be taken to assure the validity of this assumption will increase the reliability and validity of the data collected.

4. The data collected should be identified properly with respect to target groups, date, and person responsible for collection of the data. This simple precaution will help prevent lost and mislabeled data, and will enable follow-up in case questions arise regarding the data.

5. Evaluation tests and other instruments should be scored and/or coded for processing as soon as possible after the data are collected. The prearranged coding plan should be followed and then rechecked to assure accuracy. Many instruments can be scored and cards punched by machine where the appropriate answer sheets have been used and the equipment is available. Planning for the use of machine scored answer sheets and the related machine punching of data cards will generally result in greater speed and accuracy in processing evaluation data for analysis. (School systems that do not have their own test scoring equipment and personnel with expertise in data processing should seek assistance from colleges and universities, or commercial agencies that serve their region.)

6. The collection of process data usually becomes the direct responsibility of the PPS staff including counselors, teachers, psychologists, etc. and their supervisor. It is crucial that process descriptions be compiled at the time of, or immediately following, the activity. Where the process being evaluated extends over a period of weeks or months, the maintenance of activity logs often facilitates the final preparation of the process report. It is next to impossible to reconstruct the process description after-the-fact when detailed records were not maintained during the process period. The involvement of the PPS staff in the preparation of process instruments often reduces resistance to reporting process, and at the same time acquaints the staff with the content and procedures of the process data collection. Also, attention should be given to identifying target groups, specific activities used, and material and personnel

resources needed for the process. These details are absolutely necessary for an adequate process report.

Analysis of Evaluation Data

The evaluation design is the blueprint for the analysis of the evaluation data. The analyses should follow the design in all details, however additional analyses may be made where the data warrant and/or where observations of the staff suggest the need for analyses not included in the original design. For example, the original design may have specified the analysis of gains in vocational knowledge between experimental and control subjects, but the counselors may have observed that the reading ability of the pupils seemed to be related to the criterion outcome. In this case, additional analyses may be desirable to determine the extent to which the observed outcomes were attributable to level of reading ability, and how reading ability might be taken into consideration in program planning.

The mechanics of completing the analysis of evaluation data are important to assure speedy and accurate feedback from the evaluation. Computer assisted analyses are most desirable where a mass of data is involved. Computers, however, depend upon the use of a program appropriate to the analysis, and with a system of checks for errors or inconsistencies in the raw data input. The services of a good computer programmer who understands the data and the desired output is an essential for the evaluation staffing.

Some types of evaluation information are not easily adaptable to computer analyses and may be more meaningful when analyzed by professional personnel. For example, subjective counselor reports of process feasibility or some type of pupil behaviors may lose meaning if quantified for computers analysis. These subjective analyses may, however, be quite important in the interpretation of other outcome data.

Small evaluation samples may not warrant the use of computer analyses, and may be handled manually. In such cases precautions should be taken to reduce human error to a minimum by establishing checks and rechecks. Errors in tabulating and analyzing data manually are much m ore likely than in the case of good computer programmed analyses.

REFERENCES

1. A behaviorally stated competency based guidance program. Curriculum Bulletin, Andrews, Texas: June 1974.

Chapter 8

The Validating Stage

Introduction

The validation stage is concerned primarily with the interpretation of conclusions and inferences. The conclusions and inferences derived from evaluation information should relate directly to the evaluation questions, and should be supported by the evidence collected in the evaluation. If the evaluation has been designed and conducted appropriately, the conclusions and inferences should have generalization value. That is, the findings of the evaluation should provide a basis for specifying expected outcomes under similar conditions in other situations. The data should answer the question: "If we repeat the specified PPS activity can we expect to attain the results (outcomes) that were observed during the evaluation period?" Obviously, this is an extremely important question for program planners and for the PPS staff. If outcomes can be predicted, programs can be planned to produce the desired outcomes. Thus, soundly conceived and defensible conclusions and inferences become the most significant outputs of the evaluation process. Unfortunately, few evaluations employ a design that is sufficiently rigorous to produce the kind of conclusions that can be used with confidence in making program decisions. Professional judgment, often subjective, usually supplements the evaluation results in decision matters.

Conclusions may be considered as judgments made from direct observations. For example, if we observe that counseled subjects have lower test anxiety than noncounseled subjects, we may make the judgment (conclusion) that counseling reduces test anxiety. Inferences, on the other hand, may be viewed as judgments based upon other judgments and not upon direct observations. For example, we may infer that subjects with lower test anxiety will perform better on tests without directly observing that they do in fact perform better. The validity of inferences are as dependent upon the evaluation procedures used as they are upon the direct outcome data. For example, if sampling procedures are used properly, an inference may be made that the results found for the sample are valid for the larger population of subjects from which the evaluation sample was drawn. In evaluation studies the inferences that can be supported are usually more important than conclusions that may relate to a small unit of behavior or to a restricted observational situation. Thus, the validation procedures usually move from (1) conclusions with respect to the achievement of objectives, to (2) inferences about the achievement of goals, to (3) inferences about the effectiveness of PPS activities and programs, to (4) decisions about program continuation, elimination, or modification. The discussion below is addressed to the task of validation procedures, reporting, and utilization.

Questions to be Asked

Logically one might ask "Is the Validating Stage the end, or another beginning?" When program developers look at what happened, the decision making process tells them what to do next. The continuous feedback approach makes the evaluation concepts of "summative" and "formative" awkward. The "outcome evaluation" may very well be the basic needs assessment data for the next Defining Stage and thus it becomes a formative influence on program planning. This concept is consistent with the position that evaluation is a continuous process that can and should occur in any stage of program development and operation. Evaluation is not simply "something that was done at the end to see how it all came out." The Validating Stage should be more meaningful. The types of questions that could be justified include:

How was the program actually carried out?

What program goals were achieved?

What were the unanticipated events and outcomes?

How can the results be communicated?

Who should know about the results?

Were the benefits worth the input?

What implications are there for related areas?

What program elements should be adapted or adopted in other school situations?

What new directions should now be explored.

Were there differential process effects for subgroups?

Procedures Used

The task of reviewing and recommending requires a basic input of information that has been analyzed and presented in a transmittable fashion. Appropriate reporting and dissemination can follow. It is suggested here that process documentation and the analysis of program goal attainment are fundamental to the reviewing and recommending process.

Process Documentation

Purposes

- program descriptions
- costing
  - time
  - functionaires
  - resources/facilities
- side effect attitudes
  - pupils
  - staff

Procedures

- staff contact logs
- pupil-process records
- staff attitude scale
- staff interview/reaction sheets
- student interview/reaction sheets
- activity summaries

Goal Attainment

Designs

- criterion standard comparisons
- pretest-posttest comparisons
- participating-non participating comparisons

Procedures

- normative instruments
- criterion referenced measures
- indirect indicators:
  - dropout statistics
  - attendance records
  - placement records
- differential analysis
  - sex, grade, race
  - socio-economic
- responsive observations (subjective)
  - case studies
  - narrative descriptions

Goal Attainment

1. Evaluation based upon Pre-determined Criterion Standard Comparisons.

The process of specifying posttest performance expectations for pupils may be employed for effective evaluation of objectives-based programs (See evaluation designs in Chapter 6). The establishment of minimally acceptable performance standards for an objective simply refers to indicating the percentage of pupils in the target population who must attain a particular outcome in order for the program to be considered successful with respect to that outcome objective. For example, in the outcome objective, "ninety-five percent of the pupils will select a course of study consistent with their measured interest and ability," the minimum acceptable performance level has been established at 95 percent.

The specification of the minimally acceptable level should occur at the same time that the outcome is initially stated. There are not hard-and-fast rules for deriving performance standards. Rather, they are usually derived from professional judgment based on the experience of staff members. Realistic performance expectations will invariably differ across outcomes, rather than being uniform for all outcomes. Factors to consider in setting the minimal performance level for an outcome include the judged importance of the outcome, the place of the outcome in the developmental sequence, and the probability of attaining the outcome.

The next step in the evaluation of goal attainment consists of checking pupil posttest performance to determine whether the stated acceptable percentage of pupils did, in fact, attain each outcome. Summary data for making this determination consists of a tally of the number of pupils attaining the criterion level and the computation of the percentage of the target group achieving the objective. When the sample is small this process can be completed manually with a checkmark in a "yes" or "no" column for each pupil to indicate attainment or nonattainment of the outcome. With larger samples or where more detailed information is desired a frequency distribution with means, and standard deviations, and percentiles can be used as summary data for the preparation of outcome tables such as the following:

Results of Criterion Referenced Measures for Grades Four, Five, and Six - Crisp County Career Education Project 1973-74

Grade	Instrument and Objective	Achievement Level Expected	Proportion Achieving Criterion	Percent Achieving Criterion	Mean Score
4	Inventory of Personal Characteristics (1.2)	60% 24	38/55	69.1*	27.22
4	Everyday Decision Making (3.2)	75% 75	36/55	65.4	77.16
4	Basic Studies and Occupations (4.1)	60% 18	49/54	90.7*	30.78
4	Employability Characteristics (4.3)	75% 28	33/55	60%	32.53
5	Inventory of Personal Characteristics (1.2)	75% 24	66/70	94.3*	32.60
5	Everyday Decision Making (3.2)	75% 90	7/70	10.0	79.54
5	Basic Studies and Occupations (4.1)	60% 21	52/70	74.3*	25.73
5	Employability Characteristics (4.3)	75% 37	67/70	95.7*	64.86
6	Everyday Decision Making (3.2)	75%100	0/61	0.0	82.61
6	Basic Studies and Occupations (4.1)	60% 24	56/61	91.8*	33.36
6	Employability Characteristics (4.3)	75% 46	49/61	80.3*	67.77
6	Inventory of Self and Occupational Characteristics (1.2)				
	Self	67% 3	44/61	72.1*	3.33
	Occupational	67% 3	33/61	54.1	2.92

* Objective achieved

2. Evaluation based upon Pretest vs. Posttest Comparisons.

Another method frequently used within a program is the pretest-posttest comparison. (See evaluation designs in Chapter 6.) Before and after data are collected prior to exposure to the PPS activity and upon completion of the activity and then compared. The observed differences in the two measures are then interpreted in terms of (1) the statistical significance of change, (2) the percentage of pupils attaining a predetermined change standard, or (3) comparison of change among program and control groups (see below). The following table shows how such data can be summarized.

3. Participant vs. Nonparticipant (control) Comparisons.

The criterion referenced and pretest-posttest comparisons discussed above provide information that is particularly relevant for program development input. The crucial questions regarding the cause of the observed performance or change, however, cannot be answered by these types of comparisons. The cause-effect questions are critical in program continuation or elimination decisions and necessitate comparisons of the performance or gains of participating subjects with that of nonparticipating subjects (see Comparison Types 3, 4, and 7 in evaluation designs - Chapter 6). These types of comparisons not only provide evidence of goal attainment of participating pupils, but also support conclusions that the PPS process was the primary causitive factor in the observed outcomes (where significant group differences were observed). The following table summarizes the findings of this type of comparison where PPS pupils showed significant differences in school achievement over comparable control pupils.

Results of Pre-Posttests for Grade Three Crisp County Career Education Project and t Tests for Significance of Change

Grade	Instrument and Objective	N	Pre		Post		DF	t
			Mean	S.D.	Mean	S.D.		
3	Describing People (1.1)	67	4.05	2.67	10.83	2.16	66	19.150**
3	Occupational Naming (2.1)	67	6.28	5.13	17.85	5.60	66	12.822**
3	Awareness of Community Helpers (2.1)	67	11.49	3.88	14.86	2.86	66	7.962**
3	Decisions in Everyday Life (3.1)	67	2.02	1.25	9.56	3.04	66	18.491**

** p<.01

Comparison of Grade One Experimental and Control Pupil Achievement during 1970-71 as measured by the Metropolitan Achievement Test [1]

Test	Experimental Pupils (N = 417)		Control Pupils (N = 357)		Diff.	F	Probability
	Mean	S.D.	Mean	S.D.			
Word Knowledge	51.0	8.8	48.3	10.8	2.7	12.60	.001
Word Discrimination	52.1	8.7	49.4	10.5	2.7	12.91	.001
Reading	50.1	9.2	47.1	10.6	3.0	17.29	.001
Arithmetic	51.9	8.6	49.7	8.4	2.2	14.19	.001

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[1] Data from project SUCCESS, Cobb County, Georgia.

4. Responsive Observations

Outcome evaluation provides information to determine whether specified objectives have been attained, if certain promises have been kept, and if the stated intent has been fulfilled. Did what was predicted or anticipated actually happen? Evaluation that provides information about what was not predicted or was unanticipated is also important. Data on unexpected "side effects" document unintended effects of process provisions, process operation, and especially, process dynamics. The unanticipated outcomes may be either positive or negative. For instance, the predicted outcomes may be achieved but at an unusually high expense of pupil time or control over their school day. On the other hand, some of the most valued outcomes of a program may not have been stated in the program planning. This type of evaluation not only looks at unanticipated results but focuses on the pupil and staff responses to their experiences in the program. Attitude surveys, structured reaction sheets, and case-study techniques can be used to collect this type of data (Jones, et al, 1972). Another reason for using a "responsive type" of evaluation is to provide case studies, resumes, or dialogue that portray effects and impact in a more natural and direct manner. Care should be taken in that this type of evaluation is not interpreted as the collecting of testimonies. However, these narratives can provide a feel (personalized communication), that cannot be transmitted by examining the "hard" outcome data. Reports of unusual impact on individual pupils as reported in case illustrations can, also be used quite effectively in communicating more generalized group findings to the lay public. (See Appendix C for illustrative case reports.)

Process Documentation

Before a process can be validated, it must be documented. Documentation involves collecting information which shows how the program was actually implemented. Summary information of process activities can be obtained from the (1) process evaluation that was used during the inprocess program assessment and (2) new sources of process related inquiries.

The extreme importance of collecting valid and meaningful process descriptions has been emphasized throughout this handbook. The examples shown below and in the Appendix are only a few of the many ways that process can be documented and communicated. The most important point is that a precise and accurate process description is essential (1) for a meaningful interpretation of what was done to produce the observed outcomes, and (2) to enable program developers to replicate the program at another time or in another situation. With this point in mind a wide variety of methods can be used to fit the local situation.

The following is the documentation format of personnel activities used by Project SUCCESS, Cobb County, Georgia (pp. 178-180):

C. To involve parents and other agencies and personnel in a team approach to creating a teaching-learning environment conducive to optimum development of each child involved. (Process Objective)

The Child Development Specialist involved parents and other agencies in the team approach as indicated in the following tables.

Team Approach

Project Success

1968-71

5040 Consultations with Non-Professional Team Members

5040 Consultations with parents regarding:

450	Academic progress
435	Learning Disabilities
465	Physical problems
540	Social needs
165	Health problems
570	Emotional adjustment
270	Permission to test
90	Special Education
150	Pupil-Teacher relationship
375	Pupil-Parent relationship
495	Screening results
120	Placement of children
540	Project Success activities
375	Preschool screening

1234 Consultations with Outside Resources Professional Personnel

1110 County Personnel

240	Consultant for Emotionally Disturbed
75	Coordinator of Pupil Personnel Services
240	Counselors
30	Hearing Therapist
15	Math consultant
60	Nurse
165	Special Education Consultant
150	Speech Therapist
135	Visiting Teacher

- 34 Community Agencies
  - 15 Family Counseling Services
  - 15 Mental Health Clinics
  - 4 Vision Consultants
- 90 Other Personnel
  - 90 Instructional Materials Consultants

D. To assist teacher in the amelioration of learning problems by providing for an in-school team coordinated by a child development counselor. This team can immediately attack problems as they develop by adapting curriculum and learning techniques to the cognitive capabilities of children. (Process Objective)

The consultations of the Child Development Specialists with team members and resource personnels are shown in the following tables.

Team Approach

CDS Project Success

1968-71

- 64,025 Consultations with other Team Members
  - 22,830 Consultations with Other Project Professional Staff Team Members
    - 495 Consultations with Director regarding:
      - 90 Total Program plans
      - 405 Sharing Activities
    - 3,585 Consultations with Counselor Coordinator regarding:
      - 810 Overall program plans
      - 1575 Procedures for activities
      - 270 In-service education
      - 585 Sharing Cases
      - 345 Sharing Activities
    - 4,605 Consultation with Psychologist regarding:
      - 150 Retarded students
      - 495 Emotional problems
      - 165 Social needs
      - 600 Behavioral problems
      - 300 Parent Conferences
      - 105 Teacher attitudes
      - 405 Individual Tests (Selection, Administration, and Interpretation)
      - 675 Therapy with students

570 Placement of students
225 Low Academic achievement
150 Physical
765 Referrals
    540 Grade 1
    225 Grades 2-6

2,265 Consultation with Psychometrist regarding:

1455 Individual testing
60 Group testing
330 Collection of data
420 Referrals

11,145 Consultation with Learning Specialists regarding:

2580 Referrals
2580 Diagnosis of learning problems
480 Gifted
3150 Individually tailored instructional programs
750 Appropriate instructional materials and methods
90 Parent Education
345 In-service education
45 Staffing Potential Repeaters - First Grade
255 Ginn Tutorial Programs
60 Observations in the classroom
300 Developmental Programs
345 Motor Perceptual
165 Placement of students

675 Consultation with other Child Development Counselors

(See Appendix C for additional process description examples of project Success.)

The following process description explains a team approach used with program goals dealing with the prevention of education deficits (Project SUCCESS, 1971):

> In-School Team: The team in the Experimental schools was on hand to identify, evaluate and diagnose any child who was experiencing a serious learning and/or emotional problem. The child development specialist, as the team leader, attempted to mobilize the resources of the parent, principal, teacher, learning specialist, psychologist, psychometrist, director and program coordinator. Also available were certain county-wide personnel such as: the coordinators of special education, social workers and curriculum specialists. The team was

> constantly available to the Project experimental schools to spot, identify and correct a problem. Prescriptive planning, being a major part of the function of the Project, was initiated by the learning specialist. It was the responsibility of this person to prepare appropriate education programming for the child by utilizing cooperatively with each of the child development specialists in planning the educational programming for each primary child in the four experimental schools. Each child's profile or developmental folder was reviewed in order to analyze, gain background, and plan for specialized program. After this review, the learning specialist initiated conferences with each of the primary teachers to discuss the profile of each child. At this time, individual strengths and weaknesses were identified and special prescriptions were written cooperatively with the teacher and child development specialist. Every primary teacher had a follow-up conference to discuss the progress of these students, to plan further programs to prevent other problems from developing, and to provide learning experiences that would challenge the gifted. Follow-up analysis on selected children were made when it was found necessary.

Detailed process descriptions of this type are laborious to prepare, but are the only source of information for describing the process that produced the outcomes, and for communicating the evaluation results to other professionals and the public.

Reporting Evaluation Results

The reports of evaluation results should be addressed to those persons who have an interest in the basic evaluation questions asked in the evaluation plan. Such persons include district research personnel, program directors, counselors, the lay public, and funding agencies. The variance in the interests and level of research understandings of these audiences dictates the preparation of separate reports that are appropriate for each group. These diverse interests can be satisfied by preparing (1) a technical report that constitutes a full research report of the design, all statistical data, and the evaluative conclusions; (2) a professional report that focuses on the conclusions regarding the effectiveness of program activities, and recommendations for program emphases and modifications, (3) a lay report emphasizing generalizations that can be made regarding the relationships between program activities and pupil needs. The basic content of each of these reports is discussed briefly in the following sections.

Technical Reports

The technical report should be a complete description of the process being evaluated, the design of the evaluation, the results, and the conclusions and recommendations. The following outline can serve for the content of the technical report of a comprehensive program evaluation.

I. Program Description

This part of the report should describe the program being evaluated in sufficient detail for the reader to replicate the process as evaluated. The target groups, the specific PPS activities, and the personnel and facilities used should be described in detail along with the pupil needs and process goals (see preceding section on process documentation).

II. Evaluation Design

The description of the evaluation design should include a description of procedures used to formulate the evaluation questions and the program objectives. The specific evaluation hypotheses, the comparisons made, the operational definitions or instrumentation, and the types of analyses made for each objective should be described in detail. The case for the design as an adequate approach to answering the evaluation questions should be established in this part of the report.

III. Evaluation Results

The results of the evaluation should be reported in complete detail in this section. Each process and outcome objective evaluated should be presented with the evidence that the objective was, or was not, achieved. A summary of relevant descriptive statistics, and of the statistical analyses to test outcome hypotheses, should be reported in proper table form. When a large number of statistical tables are needed to report the results, it may be desirable to place some of these tables in an appendix of the report.

IV. Conclusions, Discussion and Recommendations

This section of the technical report presents the evaluative conclusions regarding the achievement of the stated objectives and the effectiveness of those objectives. The discussion of the outcome findings and conclusions can include subjective explanations and additional hypotheses suggested by the evaluative data. Recommendations that are supported by the evaluation, and relevant to administrative and program decisions, make up one of the most important parts of the evaluation report. This section should provide answers to the basic evaluation questions and discuss the program implications of the findings. The strengths and weaknesses of the program should be identified as indicated by the results. Recommendations for program modifications, and the nature of such modifications, should be presented along with the justifications based on the observed outcomes. Also this section may include a discussion of the relationship between cost and outcome. Were the results worth the cost?

V. Appendices to the Technical Report

Materials that illustrate, describe, and support the other sections of the technical report may be included as information for the reader. Forms and unpublished instruments should be included as a matter of record and for readers who may not be acquainted with the details of the methods used. Also, detailed descriptions of process activities may be included in an appendix if presentation in the body of the report would distract from clarity and readability.

Professional Reports

Reports of the evaluation for the professional and administrative staff of the school should be short and concise. Those interested in the details that support this report should be referred to the Technical Report. The professional report should include a brief summary of the findings, conclusions, and recommendations. Often most of this report can be taken directly from the "Conclusions, Discussion, and Recommendations" section of the Technical Report. Statistical tables should be used only if absolutely necessary to document the outcomes summarized. However, summary charts that symbolically or graphically show the outcomes may be quite helpful. The chart below shows one way to present the results of outcome comparisons between experimental and control pupils in a PPS evaluation conducted in Cobb County Georgia. This type of chart enables the reader to better perceive the outcomes at a glance than would be possible by examing innumerable statistical tables.

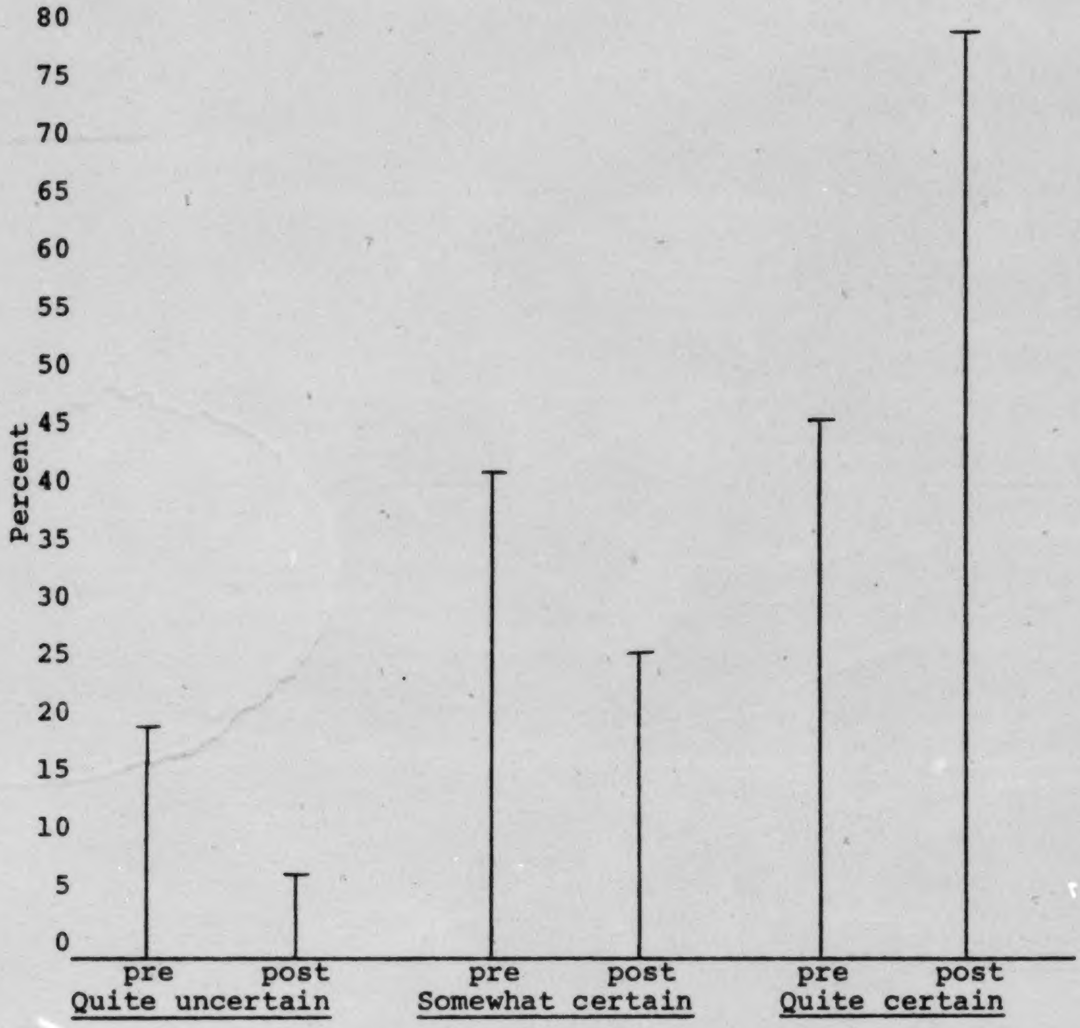
Summaries of pupil gains over time can be presented effectively by line or bar graphs. The comparisons between pretest and posttest results, as well as between groups can be shown well with this method. The example shown below was taken from the evaluation data collected in a career education project in Crisp County Georgia.

(Example of Symbolic Summary)

Summary of Comparisons Between Experimental and Control Groups on Level of Academic Achievement at the end of the 1968-69, 1969-70, and 1970-71 School Years by Grade and Sex

	1968-69			1969-70						1970-71								
	Gr One			Gr One			Gr Two			Gr One			Gr Two			Gr Three		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
MAT Word Know	+	o	o															
MAT Word Discr	+	o	+	+	+	+	+	o	+	+	+	o	o	o	o	o	o	+
MAT Reading	+	o	+	+	+	+	+	o	+	o	+	+	+	o	+	o	+	+
MAT Arith Conc	+	o	o	o	o	o	o	o	o	+	+	+	+	o	+	o	o	o
MAT Spelling							+	o	+				+	o	o	+	o	+
MAT Language																o	o	o
MAT Arith Comp																o	o	o

Code: + = Experimental group significantly higher than control group
o = No significant difference in level of the two groups
- = Control group significantly higher than experimental group



Summary of Change in Certainty of Career Choice among 12th Grade Pupils during 1973-74.

The professional report may use the professional vocabulary, but care should be taken to assess the audiences in order to avoid misunderstandings or misinterpretations due to the language usage. In summary the professional report should communicate a professional message to a professional audience.

Lay Reports

Reports prepared for communicating the evaluation results to the lay public should be brief and concise summaries of the findings and conclusions. Technical language and reference to specific instruments should be avoided whenever possible. For example, it would be better to say "the pupils had increased career awareness" than to say "the posttest scores on the Vocational Knowledge Inventory were significantly higher than the pretest scores." This report should communicate in nonprofessional language "what happened to pupils who received specific PPS." Sometimes uncluttered graphs or charts can be used effectively in lay reports, however these should be kept simple usually presenting no more than one or two variables in any one chart. It should be the type of report that could be presented to the school board, the PTA, or a local civic club.

Utilization of Evaluation Reports

The evaluation reports provide the basic content for various forms of utilization related to the general purposes of the evaluation. The most generally recognized uses of evaluation information may be summarized as (1) staff development, (2) program decisions, (3) administrative decisions, and (4) dissemination to the profession and the public. Each of these uses is discussed below along with some suggestions for the application of evaluation information.

Staff Development

Evaluation information can be used for a variety of inservice staff development activities ranging from workshops to research projects and self assessment. The evaluation reports should help counselors, teachers, and other PPS personnel to better understand pupil needs, the relative effectiveness of PPS activities, and promising new approaches to fulfilling their functions in the educational setting. The following suggestions may be helpful in planning staff development activities using evaluation information.

1. Orientation of new staff members to the organization and functioning of the PPS program.

2. Feedback sessions to develop a fuller staff understanding of the major strengths and weaknesses of the PPS program - Evaluation without feedback to those involved cannot be justified. Reinforcement of successes can be motivating for the staff while the work in doing an evaluation without feedback can be quite demoralizing.

3. Staff workshops to examine the nature and implications of pupil needs for the PPS program. This type of

activity can be particularly helpful in developing staff understanding of the interrelatedness of pupil needs and the corresponding contributions of the various pupil personnel services in responding to those needs. Teachers, counselors, school psychologists, and other specialists may become so involved in their special interests that they lose sight of the necessity to correlate their activities with those of the rest of the staff. This is particularly true where some of the staff focus on crisis needs and others on developmental needs.

4. Staff-centered program development workshops. Evaluation reports can provide the input to stimulate staff efforts in self examination and program improvement. The examination of the relevance of objectives and of process materials and activities can lead to staff interest in creating and initiating program materials and activities supported by the evaluation evidence.

Program Decisions

Good evaluation information can provide the basis for making the full range of professional program decisions. These decisions vary from the broad general issues, such as what services should be provided, to the very specific problems, such as what techniques are most effective in facilitating career decision making among minority group tenth grade pupils. The value of evaluation results to the program decision-making process will, of course, be directly proportional to the evaluation questions asked and the precision of the answers obtained. Some of the major questions requiring program decisions and related to evaluation input include the following:

1. What are the priority pupil needs that can be served by the PPS program?

2. Which of the PPS outcome objectives should receive the highest priority in program planning?

3. What is the relative effectiveness of different process procedures and techniques in achieving specific outcome objectives?

4. What is the response of the PPS staff and the pupils to the different PPS procedures and techniques?

5. What are the possible side effects of PPS procedures and techniques that are not directly related to the outcome objectives?

6. What crucial professional program questions have not been answered by the evaluation information and where is there need for further investigation?

Those responsible for program decisions should scrutinize the evaluation reports for clues to process strengths and weaknesses that may lead to the establishment of priorities or to indicated program modifications. This type of systematic examination of the reports need not be limited to the original evaluation questions and many times may yield valuable information that would otherwise be missed.

Administrative Decisions

Evaluation reports should be of value to those responsible for decisions regarding organizational patterns, personnel assignments, and resources management. Most evaluations do not provide direct answers to the typical administrative questions, but rather provide information from which inferences can be drawn for administrative decision-making. Evaluation information may provide input relevant to administrative questions such as:

1. What type of relationships among the PPS functionaries produces harmonious and efficient operations, and the expected outcomes?
2. Where are the personnel strengths and weaknesses in the PPS organization? What are the characteristics of the most effective staff members?
3. What was the cost of the outcomes observed? Was the outcome of sufficient significance to justify the cost?
4. Where can shifts in personnel or other resources produce outcomes more effectively?
5. Where should priorities be placed in the allocation of resources for the PPS program?

The professional PPS personnel should be involved in the interpretation of the evaluation results for administrative purposes. Professional explanations of process and subjective observations of significance to the process/outcome relationship can greatly improve the validity of inferences drawn for the purpose of making administrative decisions. The directors and supervisors of the various PPS should certainly be involved, as well as other professional personnel who can contribute to an accurate interpretation of the evaluation results.

Professional and Public Dissemination

The professional obligation to disseminate the results of an evaluation should be recognized by everyone responsible for program evaluation. Sometimes there is a tendency for local officials to think that the evaluation results are their private property and of no concern to others. The general purposes for dissemination of evaluation results to outside groups are (1) to communicate the findings to the profession for use in program development elsewhere, and (2) to acquaint concerned publics (parent groups, school boards, State and National legislative bodies, etc.) with the nature, values, and needs of PPS programs.

The professional communication of findings can be achieved in a number of ways including:

1. Evaluation briefs to respond to inquiries.
2. Publication in professional journals.
3. Discussion with visitors to the local project.
4. Presentations at local, state, regional, and national professional meetings.
5. Workshops and seminars at colleges and universities.
6. Submission of report to the ERIC clearing house for PPS.

The communication of evaluation findings to lay groups can be achieved through a variety of media including:

1. Presentations to local PTA, civic clubs, school boards, etc.
2. Presentations through local newspapers, radio, and television.
3. Preparation of materials describing programs and outcomes for the use of legislative committees.

In summary the results of evaluation studies are useful for the local program participants and administrators, for other professionals, and for the supporting public. The support and improvement of PPS programs can be enhanced by the preparation and dissemination of appropriate evaluation reports. The future development, yes even the future, of PPS in schools may be dependent to a large extent on conducting comprehensive evaluations and using the results professionally.

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2. Wellman, F. E. Evaluation report of career education for rural Georgians. Crisp and Liberty Counties, Georgia. Columbia, Missouri: Missouri Evaluation Projects, University of Missouri, December 1974.

3. Wellman, F. E. Final evaluation report of project SUCCESS. Columbia, Missouri: Missouri Evaluation Projects, University of Missouri, December 1971.

Appendix A: Examples of Objectives Development and Needs Assessment Forms and Procedures

Objectives Worksheet

Objectives Rating Sheet

Suggested Procedure for Conducting A Needs Assessment - Kentucky

Objectives and Activities Based on Needs Survey - South Dakota

OBJECTIVES WORKSHEET

Target Group____

General Developmental/Needs Domain:
☐ Educational
☐ Personal-social
☐ Vocational

Goal:

Objective:

Operational definition of objective:

Criterion measures:

Evaluation criteria:

Process strategies:

OBJECTIVES RATING SHEET

Instructions

Compute the average rating for each of the objectives in the following manner.

Sample Problem

An example based on 10 raters follows:

Category Values

1	2	3	4	5	AVG.
1	2	2	4	1	3.2

1. Count the number of tally marks in each rating category.
2. Multiply this number by the value of the rating category.
3. Add up the five numbers obtained in step 2.
4. Divide this number by the number of raters (in this example, the number of raters was 10). This is the average for the objective. Enter this number in the last column.

NOTE: This procedure may be used with each group sampled.

PPS Objectives	Unimportant Irrelevant 1	Marginal Importance 2	Average Importance 3	Moderately Important 4	Most Important 5	Average
1.						
2.						
3.						
4.						
5.						
6.						

(Adapted from Needs Assessment Material from Center for the Study of Evaluation, UCLA, published by CTB/McGraw-Hill)

Suggested Procedure for Conducting a Needs Assessment

I. Develop a set of 100 possible career development goals

   A. Review examples of possible goals
   B. Prepare a comprehensive list of appropriate goals
   C. Develop a checklist to be used by the participants in determining the most important goals
   D. Ask students, parents, community leaders, and school personnel to check 20 of the career development goals they feel should be given priority

II. Collect and record data

   A. Tally the responses on each goal for each group
   B. Record the total responses for each goal
   C. Circle the twenty goals that received the highest tally for each group

III. Rate the goals to determine areas of agreement among the surveyed groups

   A. Assign a priority number of 3 to each goal that was checked by all three groups
   B. Assign a priority number of 2 for each goal checked by two of the groups
   C. Assign a priority number of 1 for goals checked by only one group

IV. Determine the discrepancies between the desired attainment of the priority goals and the degree to which the goals are presently being met

   A. Rate the degree of discrepancy for each priority according to the following scale by using:
      A0, if goal is being attained
      A1, if goal is being attained with only a slight discrepancy
      A2, if goal is being attained with no more than an average discrepancy
      A3, if goal is not being attained at all
   B. Multiply the discrepancy score by the priority number (0,1,2,3). Assign the highest priority to goals having the greatest product.

V. Select a set of goals for the program

   A. List goals in order of their priority (i.e., highest to lowest)

B. List factors related to each goal such as cost, facilities, staffing, administration attitudes, community attitudes, etc. (As a consequence, goals considered not feasible will be eliminated.)

C. Consider all of these factors and compile a final list of goals to be used in planning a developmental career guidance program

Reprinted with permission from the Developmental Career Guidance Guide, prepared by the Division of Guidance Services, Bureau of Pupil Personnel Services, Kentucky State Department of Education, Frankfort, Kentucky.

OBJECTIVES AND ACTIVITIES BASED ON NEEDS SURVEY*

Purpose

The following section is designed to aid counselors in the performance of their guidance functions. This section is based on the South Dakota Needs Assessment Survey. All suggested objectives and activities are related to this survey. Sixteen separate student need categories are identified. They are as follows:

1. Understanding and accepting self.
2. Developing responsibility for self.
3. Understanding others.
4. Being understood by others.
5. Relating to others.
6. Clarifying values.
7. Assessing self.
8. Making decisions.
9. Understanding sexual identity.
10. Understanding the guidance program.
11. Selecting courses and making educational plans.
12. Making post high school plans.
13. Developing career awareness.
14. Exploring careers.
15. Planning careers.
16. Finding jobs and careers.

Each of the preceding categories contain several needs assessment items. Some items are used in more than one category due to overlapping characteristics of the items.

STUDENT NEED: Understanding Others

GRADE LEVEL	STUDENT NEED				RELATED ASSESSMENT ITEMS	STUDENT SATISFACTION		
	s	m	w	no		m	pm	not
GRADE 9	71	42	10	3	44. To better understand adults.	21	35	70
RADE 11	63	57	7	1		70	44	14

In the example provided an overwhelming majority of ninth and eleventh graders felt understanding adults to be a moderate or strong need. However, a majority of ninth grade students did not feel this need was being met, whereas, most eleventh graders did.

*Adaptation from the Counselor's Workbook, Guidance Services Division of Elementary and Secondary Education, State Capitol Building, Pierre, South Dakota 57501, July 1974.

STUDENT NEED: Understanding and Accepting Self

GRADE LEVEL	STUDENT NEED				RELATED ASSESSMENT ITEMS	STUDENT SATISFACTION		
	s	m	w	no		m	pm	not
GRADE___ GRADE___					13. To understand my abilities, interests, and other characteristics.			
GRADE___ GRADE___					23. To understand, accept and like myself better.			
GRADE___ GRADE___					27. To develop confidence in myself.			
GRADE___ GRADE___					34. To understand how my feelings affect my behavior.			
GRADE___ GRADE___					60. To learn how to be more accepting of my appearance.			

OBJECTIVE: To facilitate awareness of personal goals, capabilities, and feelings so as to encourage positive self-concept.

YOUR CRITERIA FOR EVALUATION:______________________________

SAMPLE ACTIVITIES	PROCEDURES	POSSIBLE RESOURCES
A. Small group Awareness Work	1. Discuss the purpose of small group awareness work with the administration and gain support.	Counselor
	2. Form small groups ranging from 3-5 members.	Teacher
	3. Utilize sensitivity and awareness materials, e.g., the book Awareness by John Stevens.	Book-Awareness by John Stevern
B. DUSO and/or Magic Circle	1. Arrange time to use DUSO or Magic Circle. (suggested for elementary grades)	Teacher Counselor DUSO Kit Magic Circle Kit
C. Introductory Paragraph	1. Student prepares an introductory paragraph describing self as he/she sees self and would want to be introduced to a group of people.	Counselor Teacher
	2. Student completes paragraph, but is not required to turn it in. Opportunity for conference with teacher or counselor is provided.	

Appendix B: Examples of Outcome Instruments and Procedures*

- Decisions in Everyday Life (Primary Grades)
- Everyday Decision Making (Intermediate and Junior High School Grades)
- Basic Studies and Occupations (Intermediate Grades)
- Employability Characteristics (Intermediate Grades)
- Awareness of Community Helpers (Primary Grades)
- School Occupations Awareness Inventory (Primary Grades)
- Occupational Listing (Primary Grades)
- Health Services Inventory (Primary Grades)
- Job Similarities and Differences-1 (Intermediate Grades)
- Behavioral Maturity Scale (Primary Grades)
- Inventory of Personal Characteristics (Intermediate Grades)
- Inventory of Self and Occupational Characteristics (Intermediate Grades)
- Job Model Inventory-Photographer (Junior High School Grades)
- Vocational Knowledge Inventory (Senior High School Grades)
- My Interests and Aptitudes (Senior High School Grades)
- Survey of Educational and Career Plans (Senior High School Grades)
- Case Study (Primary Grades) - Project SUCCESS

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*All instruments presented in this appendix should be considered as research instruments that are not ready for general usage.

UMC-72

Score: 1.________

2.________

Total: ________

Decisions in Everyday Life

Student's Name ______________________ Grade ___ School______________

1. Name as many things as you can think of that either require or give you an opportunity to make a choice in what you do. (Note: acceptable answers would be: 'get dressed' or 'who to play with.')

2. Name as many choices or decisions as you can think of that your parents (guardian) make that make a difference in the family life.
(Note: acceptable answers here might be: 'what food to buy' or 'where to go for vacation.')

UMC-72

Administrative Directions

Everyday Decision Making

This a rating scale that has to do with everyday decision making. It consists of 25 statements. Under each statement there are five possible places for you to respond. The directions read, "Read each statement. How does it relate to you? Fill in a circle for each item."

Fill in the first if the statement is always like you.

Fill in the second if the statement is very much like you.

Fill in the third if the statement is sometimes like you.

Fill in the fourth if the statement is not very much like you.

Fill in the fifth if the statement is never like you.

Read each statement carefully; then fill in the circle under the statement which one is like you. Be sure you fill in one for each statement.

If you have questions or want any words explained, please ask. Go ahead.

UMC-72

Score____________

Name_______________ M F __ Grade__ School_____________ Date______

Everyday Decision Making

Read each statement. How does it relate to you? Fill in a circle for each item.

1. I usually try to make decisions on my own.

always	very much	sometimes	not very much	never
0	0	0	0	0

2. If I need to find out something I usually know where to look.

always	very much	sometimes	not very much	never
0	0	0	0	0

3. When I am faced with a problem I know how to handle it.

always	very much	sometimes	not very much	never
0	0	0	0	0

4. If something puzzles or confuses me I ask questions.

always	very much	sometimes	not very much	never
0	0	0	0	0

5. I think my ideas about what should be done are as good as anyone else's.

always	very much	sometimes	not very much	never
0	0	0	0	0

6. When someone disagrees with my ideas I find it very difficult to accept another point of view.

always	very much	sometimes	not very much	never
0	0	0	0	0

7. Before I take a stand on an issue I find out how my friends feel about it.

always	very much	sometimes	not very much	never
0	0	0	0	0

8. I need people to push me before I finish things I start.

always	very much	sometimes	not very much	never
0	0	0	0	0

9. I rely on my opinion even if it conflicts with others.

always	very much	sometimes	not very much	never
0	0	0	0	0

10. I feel capable of solving my own problems.

always	very much	sometimes	not very much	never
0	0	0	0	0

11. I know when to get other people's advice about something that is troubling me.

always	very much	sometimes	not very much	never
0	0	0	0	0

12. When I meet someone with a problem I usually find ways to help them.

always	very much	sometimes	not very much	never
0	0	0	0	0

13. When I look ahead to attending junior high school I can think of some important decisions to make.

always	very much	sometimes	not very much	never
0	0	0	0	0

14. When our group is making decisions, I prefer to wait for others to offer suggestions.

always	very much	sometimes	not very much	never
0	0	0	0	0

15. When I face a problem, I have a special person I go to for help.

always	very much	sometimes	not very much	never
0	0	0	0	0

16. I am often told that I should make better plans.

always	very much	sometimes	not very much	never
0	0	0	0	0

17. After I make a decision I often think I could have made a better decision.

always	very much	sometimes	not very much	never
0	0	0	0	0

18. If my decisions are not perfect I get bothered.

always	very much	sometimes	not very much	never
0	0	0	0	0

19. My parents have confidence that I will make good decisions.

always	very much	sometimes	not very much	never
0	0	0	0	0

20. I find myself postponing making decisions until I am forced to decide.

always	very much	sometimes	not very much	never
0	0	0	0	0

21. I am aware of decisions my parents make in their work.

always	very much	sometimes	not very much	never
0	0	0	0	0

22. I am aware of decisions my teachers make in their work.

always	very much	sometimes	not very much	never
0	0	0	0	0

23. If I were given a list of workers, I could describe the kinds of decisions they have to make.

always	very much	sometimes	not very much	never
0	0	0	0	0

24. I am aware of decisions graduating high school seniors have to make.

always	very much	sometimes	not very much	never
0	0	0	0	0

25. If I were asked, I could tell the steps I went through in making my decisions.

always	very much	sometimes	not very much	never
0	0	0	0	0

DIRECTIONS FOR SCORING

EVERYDAY DECISION MAKING

Each statement is weighted on a five point scale. Maximum score for the inventory would be 125; minimum score would be 25.

Use the scoring stencil to determine the weight for each statement. Add together to determine the total score.

BASIC STUDIES AND OCCUPATIONS

Purpose: This test is designed to measure the student's awareness of the relationship between basic skills and occupations. Some of the items require recognition while other items require recall from observation and instruction.

Administration: The purpose of the test should be explained to the students. The students should understand exactly how they are to respond to each item and individual explanation should be given where needed. Any words that the students do not understand should be explained.

Scoring: Sections I, II, and III of the test have a possible score of 8 points each. (Five points for the pairs and three points for the open-ended items). Section IV has a total possible score of 20 with two points for each of the five items in part 1, and ten points for part 2 scored by the following key with one point for each correct response:

III. 2. (1) a, b, f. (3 points)
(2) e (1 point)
(3) c, d (2 points)
(4) c, d, e (3 points
(5) c (1 point)

The total score for the test is the sum of the scores for all four sections with a total possible score of 44 points. The total should be entered in the space provided at the top of the page near the student's identification information.

I__________
II__________
III__________
IV__________

BASIC STUDIES AND OCCUPATIONS

Total__________

Student____________________ Grade_________ School______________

I. Communication Skills

1. Below is a list of pairs of occupations. One of the occupations emphasizes reading, writing, listening and/or speaking; the other occupation does not. Circle the occupation that does require greater communication skills.

   a. (policeman, news reporter)
   b. (lawyer, farmer)
   c. (secretary, dish washer)
   d. (truck driver, mail carrier)
   e. (television announcer, camera man)
   f. (librarian, electrician)

2. Give one way that the communication skills which you are learning in school will be important for each of the following occupations.

   a. TV announcer ____________________
   b. psychiatrist ____________________
   c. author ____________________

II. Psychomotor Skills

1. For each of the pairs of occupations listed below, circle the occupation which requires greater physical skill.

   a. (carpenter, school principal)
   b. (auto mechanic, teacher)
   c. (scientist, fireman)
   d. (writer, artist)
   e. (plumber, salesman)
   f. (computer programmer, electronic assembler)

2. Give one way that the physical skills which you are learning in school will be important for each of the following occupations.

   a. football coach ____________________
   b. dentist ____________________
   c. housekeeper ____________________

III. Numerical Skills

1. For each of the pairs of occupations listed below, circle the occupation which requires greater mathematical and numerical skills.

   a. (bookkeeper, office manager)
   b. (psychiatrist, engineer)
   c. (carpenter, mason)
   d. (surveyor, forest manager)
   e. (clergyman, bank teller)
   f. (store clerk, painter)

2. Give one way that the numerical skills that you are learning in school will be important for each of the following occupations.

   a. tax collector ____________________

   b. scientist ____________________

   c. life insurance salesman ____________________

IV. Most occupations involve more than just one skill. An example of this is the way an airplane navigator needs communication skills as well as numerical skills.

1. List two different skills which the following occupations require and explain:

   a. bank teller ____________ ____________

   b. farmer ____________ ____________

   c. construction worker ____________ ____________

   d. store owner ____________ ____________

   e. policeman ____________ ____________

2. Below are 2 lists. One list contains activities which you might do at school. The other list contains different skills which you might need for these activities. Match with each activity the skill(s) which you feel are most needed.

ACTIVITIES

(Example) Working on a history project in a small group. a,b,c,d

(1) Doing an arithmetic problem. ____________

(2) Skipping rope in the gym by yourself. ____________

(3) Class discussion about geography. ____________

(4) Putting up decorations in the classroom. ____________

(5) Watching a film. ________

SKILLS

(a) reading

(b) writing

(c) listening

(d) speaking

(e) physical skills

(f) numerical skills

UMC-72

Score: 1. ____
2. ____
3. ____
Total ____

Name ____________________ Grade ____ School ________________________

EMPLOYABILITY CHARACTERISTICS

1. Name as many things as you can think of that an employer would want in an employee for any job.

_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________

2. Name as many things as you can think of that would be particularly important in getting and holding a job as a (n):

   a. Automobile mechanic

_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________

   b. Fireman

_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________

   c. Teacher

_______________ _______________ _______________
_______________ _______________ _______________
_______________ _______________ _______________

d. Sales clerk in a store

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

e. Brick mason (Layer)

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

f. Service station attendent

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

g. Lawyer

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

h. Secretary

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

i. Air line pilot

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

j. Truck driver

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

3. Name as many things as you can think of that would probably keep a person from getting a job or to get fired from a job.

____________________ ____________________ ____________________

____________________ ____________________ ____________________

____________________ ____________________ ____________________

____________________ ____________________ ____________________

____________________ ____________________ ____________________

UMC-73

Awareness of Community Helpers

Directions:

This inventory is intended for grades one through three. It should be administered orally and individually.

Directions to pupils:

"I am going to ask you some questions about our community and its workers. It is not a test and I will not give any grades on it. However, we want you to do as well as you can."

Note:

For some items the pupil may answer by location or give the name of someone he knows. Clarify or give an example so he will understand what is expected of him. The test administrator should make non-evaluative responses. Examples of appropriate responses are: fine, OK, good (regardless of the corectness of the student response.)

Scoring:

One point credit is given for each correct item; in the case of two part items, both parts must be correct to score the item as acceptable. The score for the scale is the total number of acceptable responses. This total score should be recorded in the space provided on the first page of the inventory.

UMC-73

____
score

Awareness of Community Helpers

Student's Name_______________________Grade__School____________

Acceptable

1. Do we have a motel in (our town)? Name a worker who works there.

acceptable - manager; maid
unacceptable - motel man; mention of a specific person eg. Uncle Henry, etc. yes no

2. Do we have a bank in (our town)? Name a worker who works there.

acceptable - teller; someone who takes the money
unacceptable - mention of a specific person yes no

3. Do we have a radio station in (our town)? Name a worker who works there.

acceptable - disc jockey
unacceptable - mention of a specific person yes no

4. What is the name of a worker who repairs our T.V. set?

acceptable - T.V. repairman
unacceptable - mention of a specific person yes no

5. What do we call the worker we buy food from?

acceptable - grocer; check out lady
unacceptable - food man yes no

6. Is a baker a producer of goods? What does he produce?

acceptable - cakes, bread, etc.
unacceptable - food yes no

7. Name another worker who produces goods.

acceptable - farmer
unacceptable - mention of a specific person yes no

8. Where can we find a salesperson who sells clothing?

acceptable - Sears; clothing store
unacceptable - a store yes no

9. Where is our newspaper made? Name a worker who works there.

acceptable - correct city; a reporter
unacceptable - a newspaper factory yes no

10. What does the mayor of a city do?

acceptable - runs the city
unacceptable - throws people in jail yes no

11. How does an electrician help us?

acceptable - keeps our electricity working; wires our houses, etc.
unacceptable - keeps on our lights; repairs our stove, etc. yes no

12. Name a worker who builds houses.

acceptable - carpenter, electrician, painter, etc.
unacceptable - mention of a specific person yes no

13. Where would you go to find a man who works in the military?

acceptable - Army base, National Guard, Fort Bragg
unacceptable - Army, Navy, etc. yes no

14. What is your father's (or guardian's) work? Is he a producer of goods or services? yes no

15. Is a beautician a producer of goods or services? yes no

16. Who is someone who provides or produces health services?

acceptable - doctor, nurse, etc.
unacceptable - janitor working in a hospital yes no

17. I am a worker who moves goods or people from one place to another. Who am I?

acceptable - truck driver, bus driver, train man
unacceptable - driver yes no

18. I help farmers with problems like what crops to grow and what fertilizer to use. Who am I?

acceptable - county agent, feed seller, man who sells fertilizer
unacceptable - problem solver yes no

19. What does an upholsterer do? yes no

20. What does an optometrist do? yes no

UMC-73
(SOAI)

School Occupations Awareness Inventory

Directions:

This inventory is designed for individual administration to first grade pupils. The teacher is to say to each pupil, "Tell me what jobs are done by grown-ups (or adults) in this school. Tell me as many as you can." If the pupil stops before naming five or more jobs, say: "What others can you think of?" until he clearly indicates that he doesn't know any more.

Scoring:

If the pupil identifies any of the employees listed on the next pages - by giving the job name, title, or work performed - put a plus (+) in the appropriate column. The score should be entered on the appropriate lines.

(SOAI)

Children's Names	Teacher	Principal	Librarian	Secretary	Cook (incl. food handlers)	Janitor	Administrators	Counselor	Crossing Guard, Safety Patrol, Police Officer	Lunch Room Worker	Nurse	Lunch Room Cashier	Reading Teacher	Teacher Assistant and Teacher Clerk	Scores
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
16.															
17.															
18.															
19.															
20.															

UMC-72
(OL)

Occupational Listing

Directions:

Read the instructions to the pupil and record his responses. If the pupil describes jobs instead of naming them, repeat the instruction about naming jobs.

Instructions:

This is an exercise to see how many jobs you can name. Name as many jobs as you can think of. Be sure to give the name of the job and not what the person does. Do you have any questions?

Scoring:

Score one point for each job title (occupation) the pupil names. Score no points for citing a job activity. Write total points on the pupil's answer page.

Example:	1 Point	0 Points
	fireman	pumping gas
	farmer	plowing
	lab technician	painting a house
	dentist	driving a bus
	cook	mowing grass

On the test response form, answer all identifying data at the top of the page.

(OL)

Name____________________

Grade____________________

Tch/Class____________________

Pre test____________________

Post test____________________

Difference____________________

OCCUPATIONAL LISTING

OCCUPATIONS

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________
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39. ____________________
40. ____________________
41. ____________________
42. ____________________
43. ____________________
44. ____________________
45. ____________________
46. ____________________
47. ____________________
48. ____________________
49. ____________________
50. ____________________

UMC-73
(HSI)

Health Service Inventory

Directions:

This inventory is designed for individual administration to the second grade. The teacher is to read each question to the pupil and record his response. If the pupil has difficulty remembering an entire question, it can be repeated.

Scoring:

At the end of administration, tally the number of correct responses and record this number in the space marked total.

(HSI)

Student's Name______________________Class_____Date_____

1. I work with boys and girls who don't feel well. If you get sick while you are in class your teacher sends you to me and I try to help you get better. Who do you think I am?

a. the school nurse
b. the janitor
c. the librarian ____________

2. I work with the dentist. I take you to the dentist's chair and help you get comfortable. I also help him with his tools. Sometimes when he needs something to put in your mouth I give it to him. Am I:

a. a doctor
b. a dental assistant
c. a registered nurse ____________

3. I work with a big machine. It is like a camera. It can take a picture of your bones. The doctor can then use this picture to help see what is wrong with you and help you get better. Who am I?

a. X-ray technician
b. Photographer
c. druggist ____________

4. I work in a doctor's office or a hospital. I am a medical secretary. I keep the records of when you were sick and what the doctor did to help you get better. Which of the following do you think I work with the most?

a. a hose and shovel
b. pliers and wire
c. paper and pen ____________

5. I am a doctor. I work in an office or in a hospital. I had to go to school for a long time to learn about many illnesses. Do you think I work more with?

a. people
b. plants
c. machines ____________

(HSI)

6. I am a dietician. Sometimes I work in a school. My job then would be to see to it that the students get enough nutrition when they eat. It they don't eat right they can get sick. Which of these things do I have to know the most about?

a. the weather
b. brooms and cleaning fluids
c. calories and food ____________

7. I am a pharmacist. When your doctor wants you to take some medicine he gives you a prescription which you give to me and then I sell you the medicine you need. Do I work in:

a. an office
b. a store
c. a school ____________

8. I am a surgeon. Sometimes when people are sick I operate on them and help them get better. Sometimes when boys and girls are sick they come to me and I take their tonsils out. Do I work in a:

a. store
b. shop
c. hospital ____________

9. I am a nurse. I work with a doctor. Sometimes I take your temperature. Sometimes I take blood samples. Do people come to see me when:

a. they are lost
b. they need something fixed
c. they don't feel well ____________

10. I am a dentist. I know a lot about teeth. I can help keep your teeth clean and healthy. I can also help take care of your teeth if something goes wrong with them. Where do you think I work?

a. in an office
b. outdoors
c. at a store ____________

TOTAL ____________

(JSD-1)

Student's Name ____________________________ Class ______ Date __________

Job Similarities and Differences-1

DIRECTIONS:

In the groups below and on the next pages, three of the four occupations belong together. First, circle the three that go together. Then, on the line provided, write the letter of the reason why the three circled jobs go together, and the fourth one doesn't belong.

For instance, in the example below, frog, dog, and cat belong together, and table doesn't belong. The reason the three go together is because they all are kinds of animals and the table isn't.

[✓ frog] [✓ dog] table [✓ cat]

a. They all are kinds of cars.
b. They all are kinds of animals.
c. They all are kinds of work.
d. They all are kinds of machines. b

Now try the example below:

car boat plane chair

a. They all are kinds of animals.
b. They all can be found in a house.
c. They all are machines that people use to get places.
d. They all are kinds of furniture. _____

You should have circled car, boat and plane. Then you should have put C as the correct answer.

1. bus driver travel agent musician chief steward

a. They all work with living things.
b. They all tell other people how to protect natural resources.
c. They all tell people about things and ideas.
d. They all follow planned trip schedules. 1._____

2. engine mechanic tire repairman youth counselor gas station attendant

a. They all work with people.
b. They all make things you buy.
c. They all help make things move.
d. They all have to go to college. 2._____

3. secretary airline pilot bus driver locomotive engineer

a. They all make something you buy.
b. They all help people get places safely.
c. They all tell people about ideas.
d. They all have to be licensed to operate a vehicle.

3.______

4. steward production specialist captain chief mate

a. They all work on a train.
b. They all make things you buy.
c. They all have to know about art.
d. They all work on a ship.

4.______

5. ticket agent airline pilot stewardess gas station attendant

a. They all might work at an airport.
b. They all might work with cars.
c. They don't wear uniforms.
d. They all need a college degree.

5.______

6. truck driver airline pilot locomotive engineer ship's captain

a. They all work days only.
b. They all usually help move people.
c. They all work with animals.
d. They all tell people about new ideas.

6.______

7. author bus driver airline pilot ship's captain

a. They all work only during the day.
b. They all wear a uniform.
c. They all work mainly with animals.
d. They all have to know about art.

7.______

8. truck driver locomotive engineer airline pilot teacher

a. They all help move goods and people.
b. They all help get new ideas to people.
c. They all need a college degree.
d. They all work indoors.

8.______

9. porter janitor steward stewardess

a. If you are going someplace, all of these people might help you with your suitcases and coats.
b. They all need a college degree.
c. They all work out doors.
d. They all work only with animals.

9.______

Do not write in this space

Project Number __ __
School Number __ __
Class Number __ __
Student Number __ __ __ __

A F Score __ __
S F Score __ __
E F Score __ __
Total Score __ __

BEHAVIORAL MATURITY SCALE

(Elementary Form)

Student's Name ______________________ Age: ___ Years ___ Months ___

Teacher's Name ______________________ Date ________________

Observer's Name(If not teacher) ____________________________

School ____________________________ Grade ________________

Observer's Comments:

by

Yung Ho Kim

Research & Development Center
in Educational Stimulation
University of Georgia
Athens, Georgia

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1. The student can work alone for a period of time.

never 1 2 3 4 5 always

2. The student returns to a task unfinished from the previous day and develops it.

never 1 2 3 4 5 always

3. The student carries activities to completion.

very rarely 1 2 3 4 5 very often

4. The student carries out brief individual assignments in school without supervision.

never 1 2 3 4 5 very often

5. The student reads on his/her own initiative.

very rarely 1 2 3 4 5 very often

6. The student enjoys books, newspapers, and/or magazines.

not at all 1 2 3 4 5 very much

PAGE ONE SUBTOTAL________________

7. The student enjoys team games and group games.

very little 1 2 3 4 5 very much

8. The student makes friends quickly and easily.

never 1 2 3 4 5 definitely

9. The student takes part in competitive games.

very little 1 2 3 4 5 very much

10. The student takes initiative at play or in the classroom.

never 1 2 3 4 5 always

11. The student is friendly toward other people.

not friendly at all 1 2 3 4 5 always friendly

12. The student assumes group leadership for a given activity.

never 1 2 3 4 5 always

PAGE TWO SUBTOTAL________________

13. The student's remarks about others are kind; that is, he/she does not say things to hurt other's feelings.

not kind 1 2 3 4 5 very kind

14. The student reacts properly to the teacher's approval or disapproval.

very poorly 1 2 3 4 5 very properly

15. The student is inclined to sympathize rather than laugh at those in difficulty.

laughs at them 1 2 3 4 5 sympathizes with them

16. The student remains calm when he/she cannot get what he/she wants.

never 1 2 3 4 5 always

17. The student can lose with grace (fair play).

never 1 2 3 4 5 very properly

18. The student knows how to take turns at games, talking, and in the use of facilities.

very poorly 1 2 3 4 5 very well

PAGE THREE SUBTOTAL ____________

Copy subtotals here page 1 ____________

page 2 ____________

page 3 ____________

269 ____________

TOTAL ____________

INVENTORY OF PERSONAL CHARACTERISTICS

This inventory is a test of knowledge of the ways that the physical, social, and ability (or work) characteristics of people can be described, and of how certain characteristics can be used to describe workers in different occupations.

Scoring: One point is given for each correct response. The highest possible score is 40 with a maximum of 10 for each of the four sections.

Student's Name________________________________Grade______School_______

Do Not Write Below this Line - For School Use Only

Score:

I.1. Physical __________

I.2. Social __________

I.3. Abilities __________

II. Workers __________

Total __________

MISSOURI EVALUATION PROJECTS

University of Missouri

Columbia, Missouri

1974 270

I. Describing people

1. In each of the following pairs of words circle the word that might be used to describe a person's physical characteristics.

tall - lazy

happy - strong

fat - cool

masculine - friendly

dull - handsome

efficient - lame

blonde - cheerful

warm - complexion

robust - loyal

selfish - awkward

2. In each of the following pairs of words circle the word that might be used to describe a person's social characteristics.

bright - friendly

cooperative - quick

neat - strong

blonde - charming

cheerful - artistic

industrious - considerate

poised - tall

blind - selfish

dull - tactful

loyal - short

3. In each of the following pairs of words circle the word that might be used to describe a person's abilities or the way he works.

short - fast

bright - pretty

clear-thinking - warm

handsome - quick

industrious - robust

cool - dull

loyal - artistic

mechanical - happy

tall - efficient

lazy - fat

II. Describing workers

Different workers can be described in different ways. Each of the following occupations is followed by two descriptions. Pick the one that you think would be most like a person working in the occupation and circle the letter in front of your choice.

1. Farmer
   a. healthy and physically active
   b. speaks well before a group
2. Policeman
   a. good mechanical knowledge and skills
   b. tactful in dealing with people
3. Librarian
   a. likes to read and work indoors
   b. healthy and physically active
4. Salesman
   a. likes to work with people
   b. good looking
5. Carpenter
   a. good in reading
   b. good in arithmetic
6. Secretary
   a. good in arithmetic
   b. good in spelling
7. Dentist
   a. good public speaker
   b. good in working with his hands
8. Truck driver
   a. good eyesight
   b. good in arithmetic
9. Teacher
   a. able to speak well
   b. physically strong
10. TV repairman
    a. able to read well
    b. able to work with small things

INVENTORY OF SELF AND OCCUPATIONAL CHARACTERISTICS

Missouri Evaluation Projects
University of Missouri
Columbia, Missouri
1973

Your Name____

Your Grade_______________

Your School__________________________________

Do not write below this line.

Teacher record scores here:

Self Characteristics score___________________

Occupational Characteristics score___________

Inventory of Self and Occupational Characteristics

Student's Name____________________Grade___School____________________

What kind of a person are you? What do you want from an occupation? Now complete the following:

Self Characteristics: check five words from the list below which best describe you.

____	Helpful	aids or assists others
____	Creative	uses his imagination to create new things or ideas
____	Sociable	enjoys companionship with others
____	Athletic	likes to compete and participate in games and sports
____	Musical	has an interest in or a talent for music-vocal or instrumental
____	Ambitious	has a great desire for fame, power, or money
____	Dependable	is reliable and can be trusted
____	Attractive	is pleasing to look at
____	Studious	enjoys studying and reading
____	Confident	feels certain he has the ability to do well
____	Mechanical	enjoys working with tools and machines
____	Adventurous	likes to try new things and take risks
____	Humorous	has a sense of humor
____	Persistent	stays with a task or assignment until it is completed
____	Flexible	is able to change easily to meet different situations

Occupational Characteristics: check five items from the list below which are important to you in choosing a future occupational field.

____Being accurate or not
____Making money
____Associating with interesting people
____Expressing ideas and feelings to others
____Using machinery or tools
____Helping others
____Growing crops
____Caring for animals
____Traveling and moving often
____Using physical abilities
____Using numbers and collecting information
____Selling goods
____Performing or entertaining
____Taking risks and exploring
____Keeping things in order

Your Future Occupation

Think of an occupational field which you might like to be in as an adult. What is it?

____________________________. Now complete the following:
(Name of Occupation)

Personal Characteristics: check five words from the list below which describe a successful person in this occupation.

____Helpful	aids or assists others
____Creative	uses his imagination to create new things or ideas
____Sociable	enjoys companionship with others
____Athletic	likes to compete and participate in games and sports
____Musical	has an interest in or a talent for music-vocal or instrumental
____Ambitious	has a great desire for fame, power, or money
____Dependable	is reliable and can be trusted
____Attractive	is pleasing to look at
____Studious	enjoys studying and reading
____Confident	feels certain he has the ability to do well
____Mechanical	enjoys working with tools and machines
____Adventurous	likes to try new things and take risks
____Humorous	has a sense of humor
____Persistent	stays with a task or assignment until it is completed
____Flexible	is able to change easily to meet different situations

Occupational Characteristics: check five items from the list below which best describe this occupation.

____Being accurate
____Making money
____Associating with interesting people
____Expressing ideas and feelings to others
____Using machinery or tools
____Helping others
____Growing crops
____Caring for animals
____Traveling and moving often
____Using physical abilities
____Using numbers and collecting information
____Selling goods
____Performing or entertaining
____Taking risks and exploring
____Keeping things in order

Inventory of Self and Occupational Characteristics

Grade Six

INSTRUCTIONS FOR ADMINISTRATION AND SCORING

Administration:

This inventory has two parts. The first part asks the pupil to check (1) five characteristics that he thinks best describe him as a person; and (2) five occupational characteristics that are important to him in choosing a future occupational field. The second part asks the pupil to name an occupational field that he thinks he might like as an adult and then to check (1) five personal characteristics that he thinks a person should have to be successful in the occupational field he has named in the space above; and (2) five characteristics that he thinks best describe the occupational field he has named. The inventory may be administered in a group setting, if carefully monitored, and if caution is taken to see that all pupils follow the directions. The principal cautions are: (1) the five tasks should be completed in the order presented above; and (2) exactly five characteristics (no more, no less) should be checked in each of the four columns.

Scoring:

Two scores are derived from this inventory: (1) a Self Characteristics score, and (2) an Occupational Characteristics score. These scores are obtained from the extent of agreement between the characteristics checked on part one (page one) of the inventory and the characteristics checked on part two (page two) of the inventory. The Self Characteristics score is computed by counting the number of self characteristics checked on page one that are the same as the personal characteristics checked on page two, that is, if "dependable" is checked on both pages it is counted as an agreement, and soforth. The total number of checks that agree is then multiplied by 20 to get the Self Characteristics score that is entered on the cover page of the inventory. For example, two checks that agree gives the pupil a score of 40, four a score of 80, etc. The Occupational Characteristics score is obtained and recorded in exactly the same manner.

UMC-74

NAME____________________________ SUBJECT____________________________

Sex: Female____ Male_____

PHOTOGRAPHER-JMI-17

DO NOT MARK ON THE TEST. RECORD YOUR ANSWERS TO THE RIGHT.

The following steps tell you how to record your answers.
Step 1-Print your name in the space provided above on this sheet.
Step 2-Now do the same for sex information directly below your name.
Step 3-On the answer sheet find item number one. Now fill in the circle A for this item.
Step 4-Now you are ready to start answering the test questions. Move down to item 4 on the answer sheet and fill in the circle for the correct answer to item 4 on the test. Be sure you start answering with item 4 on the answer sheet. Now go on with the rest of the test answering in the same way.

4. The job cluster that includes the occupation of photographer is
   a. transportation
   b. health
   c. sales
   d. fine arts and humanities

5. A photographer works mainly with
   a. people and things
   b. numbers
   c. mechanical devices
   d. chemicals

6. The photographer can find the greatest opportunities for work with
   a. advertising, newspaper, or magazine publishers
   b. schools and colleges
   c. police departments
   d. real estate firms

7. A photographer should have
   a. athletic ability
   b. originality and imagination
   c. mechanical ability
   d. verbal skills

8. A photographer using either a still or motion picture camera, must be familiar with
   a. microscopes
   b. air filters
   c. lights and lenses
   d. hydrometers

9. High school courses useful for a photographer include
   a. physical education and home economics
   b. chemistry and art
   c. electronics and mechanics
   d. english and social studies

10. The working environment of a photographer generally includes
   a. regular hours
   b. much routine with little variety
   c. working either indoors or outdoors
   d. noisy and dirty conditions

11. For the most part, in the best opportunities for the beginning photographers lie in
   a. sports photography
   b. industrial photography
   c. portrait photography
   d. scientific photography

12. A career related to that of the photographer would be a
   a. philosopher
   b. optic lense technician
   c. photosynthesizer
   d. motion picture cameraman

13. A basic requirement for the photographer is ability in
   a. math
   b. physical education
   c. art
   d. social studies

14. The average salary for the beginning photographer is
   a. depends on the place of employment
   b. well established in all areas of specialization
   c. based on supply and demand for cameras
   d. established by union scales

15. Of the approximately 80,000 people who work as photographers, the proportion of women is about
   a. 25%
   b. 50%
   c. 75%
   d. 90%

16. The equipment or material used by a photographer will most likely include a
   a. tachometer
   b. calculator
   c. humidistat
   d. light meter

17. The photographer's temperament should include
   a. perservance
   b. temperance
   c. aggressiveness
   d. passiveness

18. As a photographer, a job related career would be
    a. photosynthesis
    b. image creator
    c. graphologist
    d. photogrammetrist

19. A future demand for photographers is expected to be in work with
    a. microwaving
    b. process experimentation
    c. microfilming
    d. reprocessing

20. A basic duty of a photographer would include
    a. developing new products
    b. making equipment adjustments for different light
    c. adjusting audio levels on recording equipment
    d. proof reading advertising copy

21. The job of a photographer in industry would probably include
    a. making sure each individual belongs to a union
    b. developing new standards for personnel
    c. making industrial improvements on the company's products
    d. taking pictures for the company's publications

22. To be a photographer one must be
    a. attractive
    b. passive
    c. imaginative
    d. aggressive

23. A photographer is required to have
    a. a license in most states
    b. no license
    c. a college diploma
    d. a diploma issued by the state examiner

JOB MODEL DESCRIPTION

PHOTOGRAPHER

A photographer is in the Fine Arts and Humanities cluster. Using either a still or motion picture camera, he must be familiar with all of the lenses, filters, lights, chemicals, and equipment necessary to produce a finished picture. With the many areas of photography to choose from, the photographer may specialize in portraits and work in a person's home or his own studio. He may do commercial work and photograph items such as clothing, furniture, food products, or houses for real estate sales. Industry provides another area where the photographer usually works for just one company, taking pictures for the company's publications or advertising.

A. Physical Requirements

1. Manual dexterity
2. Good eyesight
3. Pleasant appearance
4. Strong enough to carry or lift equipment

B. Aptitude, Interest and Temperament

1. Artistic ability
2. Originality and imagination
3. Exacting but flexible when needed
4. A sense of dimension, color, perception, balance
5. Perseverence

C. Pre-Entry Education Requirements

High School

1. Chemistry
2. Art
3. Photography

College: Two or Four years for specialized fields of photography
On-the-job training: developing, printing, assisting

D. Work Environment

1. Either indoors or outdoors
2. Physically easy but highly demanding upon skill, originality and dedication
3. May have to travel, although much time is spent in a modern well-equipped studio
4. Pleasant work, opportunities for self-expression
5. Irregular hours at times

E. Location of Job

1. May be in a nearby studio
2. May require constant travel depending upon the specific type of photography

F. Earnings

1. $4,880 to $15,000 plus per year
2. If salaried he may receive sick leave, disability benefits, retirement pension, and insurance
3. The self-employed provide for their own benefits and equipment

G. Future Demands

1. Employment opportunities will be good with the largest growth in industrial photography
2. Microfilming is a growing field
3. Competition will be greatest in the field of portrait photography
4. Fields needing photographers include newspapers, police departments, serial photography, and educational photography

H. Related Careers

1. Photographic Engineer
2. Photoradio Operator
3. Photograph Retoucher
4. Photoengraver
5. Motion Picture Cameraman
6. Photogrammetrist
7. Reproduction Technician
8. Photographic Sensitometrist

VOCATIONAL KNOWLEDGE INVENTORY

Developed by Fred D. Fraser

Adapted by Robert B. Godfrey

University of Missouri, Columbia

This is an inventory of your knowledge about many kinds of occupations and vocations. The results may be helpful to you in your educational and career planning. Read the directions and questions carefully, choose the one best answer in each case, and put all your answers on the answer sheet provided. Do not mark the inventory booklet. There is no penalty for guessing.

Revised July, 1972. No part of this inventory may be reproduced or copied in any way without permission of the author.

VOCATIONAL KNOWLEDGE INVENTORY

In each of questions 1-6, which of the five choices is most likely to work more "with people" than "with things or ideas"?

1. a. Janitor
   b. Barber
   c. Locksmith
   d. Auto Mechanic
   e. Tool and Die Maker

2. a. Receptionist
   b. Statistician
   c. Court Stenographer
   d. Auditor
   e. Bookkeeper

3. a. Computer Designer
   b. Computer Programmer
   c. Architect
   d. Astronomer
   e. Dentist

4. a. Music Composer
   b. Musician
   c. Clothing Designer
   d. Stage Director
   e. Cartoonist

5. a. Personnel Manager
   b. Economist
   c. Sales Engineer
   d. Radio Announcer
   e. Importer of foreign goods

6. a. Proofeader
   b. File clerk
   c. Receptionist
   d. IBM Key Puncher
   e. Clerk-typist

In questions 7-10, which would probably offer the most change in work location?

7. a. Short Order Cook
   b. Janitor
   c. Power Shovel Operator
   d. Laboratory Technician
   e. Waitress

8. a. Dentist
   b. Archeologist
   c. Veterinarian
   d. Philosopher
   e. Mathematician

9. a. Auditor
   b. Stenographer
   c. Stock Clerk
   d. File Clerk
   e. Proof reader

10. a. Newspaper Reporter
    b. Advertising Copy Writer
    c. Advertising Layout Man
    d. Cartoonist
    e. Book Censor

In questions 11-12, which of the choices is least likely to require working evenings and/or weekends?

11. a. Store Clerk
    b. Real Estate Salesman
    c. Insurance Salesman
    d. Stock & Bond Salesman
    e. Radio Program Director

12. a. Cook
    b. Construction Worker
    c. Filling Station Attendant
    d. Truck Driver
    e. Farmer

In each of questions 13-18, which of the vocations would probably provide the highest yearly income?

13. a. Salvation Army Officer
b. YMCA Secretary
c. Speech Therapist
d. School Principal
e. Vocational Counselor

14. a. Forest Ranger
b. Bus Driver
c. Auto Mechanic
d. Machinist
e. Heavy Equipment Operator

15. a. Architect
b. Experimental Psychologist
c. Astronomer
d. Philosopher
e. Mathematician

16. a. Payroll Clerk
b. Court Stenographer
c. Postal Clerk
d. Bank Teller
e. File Clerk

17. a. State Governor
b. Business Executive (Large Corp)
c. U.S. Senator
d. Insurance Salesman (Large Corp)
e. College President

18. a. Liquor Salesman
b. Headwaiter
c. Radio Announcer
d. Stockbroker
e. Tax Collector

In questions 19-20, which job is most likely to require shorthand?

19. a. Court Stenographer
b. Administrative Assistant
c. Accountant
d. Secretary of State
e. Legal Secretary

20. a. Proof Reader
b. File Clerk
c. Cashier
d. Receptionist
e. Secretary

In questions 21-23, which would probably require the least mathematical and numerical ability?

21. a. Physicist
b. Botonist
c. Engineer (Civil)
d. Chemist
e. Meteorologist

22. a. Surveyor
b. Draftsman
c. Tool Designer
d. Laboratory Tech.
e. Plumber

23. a. Accountant
b. Bookkeeper
c. Payroll Clerk
d. Statistician
e. Shipping Clerk

In questions 24-28, which requires the least number of years of formal education?

24. a. Licensed Practical Nurse
b. Registered Nurse
c. Bachelor of Arts in Nursing
d. Bachelor of Science in Nursing
e. Associate of Arts in Nursing

25. a. Elementary School Teacher
b. High School Teacher
c. Army Chaplain
d. Druggist (Pharmacist)
e. Fire Chief

26. a. Medical Technologist
b. Veterinarian
c. Inventor
d. Dentist
e. Architect

27. a. College Dean
b. Lawyer
c. Industrial Psychologist
d. Attorney
e. Optician

28. a. English Teacher
b. Fashion Model
c. Philosopher
d. Advertising Manager
e. Foreign Language Interpreter

In questions 29-32, which is least likely to require a college degree?

29. a. Anthropologist
b. Science Fiction Writer
c. Astronomer
d. Research Scientist
e. Writer of Technical Articles

30. a. Psychologist
b. Speech Therapist
c. Justice of the Peace
d. Sociologist
e. School Principal

31. a. Funeral Director
b. Physical Therapist
c. Inhalation Therapist
d. Occupational Therapist
e. Navy Chaplin

32. a. Certified Public Accountant
b. Insurance Agent
c. Statistician
d. Economist
e. Typing Teacher

In questions 33 and 34, which of the following does not require an M.D. degree?

33. a. Psychiatrist
b. Brain Surgeon
c. Pediatrician
d. Osteopath
e. Both C and D

34. a. Veterinarian
b. Dentist
c. Brain Surgeon
d. Obstetrician
e. Both A and B

In questions 35-36, which is most likely to be at the site of construction of a new building?

35. a. Electrician
b. Machinist
c. Electronic Technician
d. Tool Designer
e. Industrial Engineer

36. a. Cabinet Assembler
b. Cabinet Installer
c. Cabinet Salesman
d. Cabinet Designer
e. Cabinet Refinisher

In questions 37-40, which is most likely to have a college degree?

37. a. Hotel Manager
b. Sports Promoter
c. Insurance Salesman
d. Foreign Diplomat
e. Appliance Salesman

38. a. Folk Singer
b. Jazz Musician
c. Concert Musician
d. Night-club Singer
e. Rock Musician

39. a. Typist
b. Certified Public Accountant
c. Library Assistant
d. Telephone Operator
e. Traffic Checker

40. a. T.V. Repairman
b. Carpenter
c. Machinist
d. Electrician
e. Conservation Agent

In questions 41-45, which would probably work indoors the most?

41. a. Bricklayer
b. Mail Carrier
c. Cement Mason
d. Electrician
e. Surveyor

42. a. Real-estate Salesman
b. Insurance Salesman
c. Appliance Salesman
d. Car Salesman
e. Route Salesman

43. a. Truant Officer
b. Playground Director
c. Parole Officer
d. Athletic Coach
e. Ward Attendant

44. a. Dynamiter
b. Forest Ranger
c. Photo-developer
d. Photographer
e. Auto Mechanic

45. a. Archeologist
b. Geologist
c. Zoologist
d. Botanist
e. Neurologist

In questions 46-49, which would probably work outdoors the most?

46. a. Real-estate Appraiser
b. Bank Teller
c. Credit Investigator
d. Bank Examiner
e. Cashier

47. a. Headwaiter
b. Route Salesman
c. Sales Engineer
d. Furniture Salesman
e. Personnel Manager

48. a. Crane Operator
b. Radio Operator
c. FBI Agent
d. Tile Setter
e. Carpenter

49. a. Chemical Engineer
b. Aeronautical Engineer
c. Mathematician
d. Civil Engineer
e. Physicist

In questions 50-55, which of the five choices is most likely to be self employed?

50. a. Counselor
b. Bartender
c. Librarian
d. Social Worker
e. Funeral Director

51. a. Cashier
b. Office Manager
c. Typist
d. Accountant
e. Clerk-Stenographer

52. a. Policeman
b. Fireman
c. Detective
d. FBI Agent
e. Soldier

53. a. Restaurant Owner
b. Life Insurance Salesman
c. Treasury Agent
d. Prosecuting Attorney
e. Police Chief

54. a. Editor
b. Reporter
c. Advertising Agent
d. Art Teacher
e. Artist

55. a. Bus Driver
b. Navy Pilot
c. Janitor
d. Farmer
e. Airplane Mechanic

In questions 56-59, which of the five choices is least likely to be self employed?

56. a. Computer Programmer
b. Inventor
c. Surgeon
d. Architect
e. Science Fiction Writer

57. a. Poet
b. Novelist
c. Reporter
d. Author
e. Playwright

58. a. Composer
b. Sculptor
c. Art Critic
d. Commercial Artist
e. Musician

59. a. Auctioneer
b. Insurance Claims Adjustor
c. Building Contractor
d. Sports Promoter
e. Importer of Foreign Goods

In questions 60-65, which is most likely to require some type of state or city license?

60. a. Forest Ranger
b. Plumber
c. Barber
d. Auto Body Repairman
e. Carpenter

61. A. Surgeon
b. Biologist
c. Bacteriologist
d. Geologist
e. Mathematician

62. a. Art Critic
b. Novelist
c. Clothes Designer
d. Art Dealer
e. Comedian (Entertainer)

63. a. Social Worker
b. Parole Officer
c. Funeral Director
d. Truant Officer
e. Minister

64. a. Registered Nurse
b. Girl Scout Leader
c. Flower Arranger
d. Nurses Aid
e. Little League Umpire

65. a. College English Instructor
b. Musician
c. High Achool Art Teacher
d. Writer
e. Artist

1. b
2. a
3. e
4. d
5. a
6. c
7. c
8. b
9. a
10. a
11. d
12. b
13. d
14. e
15. a
16. b
17. b
18. a
19. e
20. e
21. b
22. e
23. e
24. a
25. e
26. c
27. e
28. b
29. b
30. c
31. a
32. b
33. d
34. e
35. a
36. b
37. d
38. c
39. b
40. e
41. d
42. c
43. e
44. c
45. e
46. a
47. b
48. a
49. d
50. e
51. d
52. c
53. a
54. e
55. d
56. a
57. c
58. d
59. b
60. c
61. a
62. d
63. c
64. a
65. c

Realistic - 1, 7, 12, 14, 22, 35, 36, 40, 41, 44, 46, 52, 55, 60 = 14

Investigative - 3, 8, 15, 21, 26, 29, 34, 45, 47, 56, 61 = 11

Social - 13, 24, 25, 30, 31, 33, 43, 50, 63, 64, = 10

Conventional - 2, 6, 9, 16, 19, 20, 23, 32, 39, 48, 51 = 11

Enterprising - 5, 11, 17, 18, 27, 37, 42, 49, 53, 59 = 10

Artistic - 4, 10, 28, 38, 54, 57, 58, 62, 65 = 9

MY INTERESTS AND APTITUDES

Missouri Evaluation Projects
University of Missouri
Columbia, Missouri

Student Information

Name________________________________School___________________________

Grade__________________________Age____________Sex: Male____Female____

Your interests and aptitudes are important to you in planning your future education and career. Interests indicate what you would like to do. Aptitudes indicate the ability you have to complete training and to work successfully in occupations requiring special competencies. This self-rating of your interests and aptitudes gives you an opportunity to estimate how much interest and aptitude you think you have in each of ten different areas. Please ask your teacher to explain any words or instructions you do not understand.

For School Use: DO NOT WRITE IN SPACE BELOW

	1-Ve	2-Nu	3-Ph	4-Sp	5-Cl	6-Me	7-So	8-Sc	9-Sa	10-Mu	Total
Interests	____	____	____	____	____	____	____	____	____	____	____
Aptitudes	____	____	____	____	____	____	____	____	____	____	____
Difference	____	____	____	____	____	____	____	____	____	____	____
Occupation	____	____	____	____	____	____	____	____	____	____	____

*Total difference score is the algebraic sum of the difference for each area subtracting aptitude from interest rating.

**Total occupation score is the sum of the number of areas in which a correct occupation was given--Total possible score of 10.

MY INTERESTS AND APTITUDES

AREAS OF INTEREST AND APTITUDES	MY INTERESTS IN THIS AREA ARE:	MY APTITUDES IN THIS AREA ARE:	AN OCCUPATION REQUIRING INTERESTS AND APTITUDES THIS AREA IS:
VERBAL: (work with and understanding verbal communication oral or written)	Very high _____ High _____ Average _____ Low _____ Very Low _____	Very high _____ High _____ Average _____ Low _____ Very Low _____	
NUMERICAL: (work with numbers and mathematics)	Very high _____ High _____ Average _____ Low _____ Very Low _____	Very high _____ High _____ Average _____ Low _____ Very Low _____	
PHYSICAL OR ATHLETIC: (work with my hands and body)	Very High _____ High _____ Average _____ Low _____ Very Low _____	Very High _____ High _____ Average _____ Low _____ Very Low _____	
SPATIAL: (work with two or three dimensional drawings, as in art or drafting)	Very High _____ High _____ Average _____ Low _____ Very Low _____	Very High _____ High _____ Average _____ Low _____ Very Low _____	
CLERICAL: (work with details in names and words, as in typing, filing, cataloguing, etc.	Very High _____ High _____ Average _____ Low _____ Very Low _____	Very High _____ High _____ Average _____ Low _____ Very Low _____	
MECHANICAL: (work with machines and tools)	Very High _____ High _____ Average _____ Low _____ Very Low _____	Very High _____ High _____ Average _____ Low _____ Very Low _____	

AREAS OF INTEREST AND APTITUDES	MY INTERESTS IN THIS AREA ARE:	MY APTITUDES IN THIS AREA ARE:	AN OCCUPATION REQUIRING INTERESTS AND APTITUDES IN THIS AREA IS:
SOCIAL: (work with other people)	Very High _____	Very High _____	
	High _____	High _____	
	Average _____	Average _____	
	Low _____	Low _____	
	Very Low _____	Very Low _____	
SCIENTIFIC: (seek out and apply knowledge or technical information in the solution of problems)	Very High _____	Very High _____	
	High _____	High _____	
	Average _____	Average _____	
	Low _____	Low _____	
	Very Low _____	Very Low _____	
SALES: (communicate with others for the purpose of selling ideas, goods, or services)	Very High _____	Very High _____	
	High _____	High _____	
	Average _____	Average _____	
	Low _____	Low _____	
	Very Low _____	Very Low _____	
MUSICAL: perform in instrumental or vocal music)	Very High _____	Very High _____	
	High _____	High _____	
	Average _____	Average _____	
	Low _____	Low _____	
	Very Low _____	Very Low _____	

SURVEY OF EDUCATIONAL AND CAREER PLANS

Missouri Evaluation Projects
University of Missouri
Columbia, Missouri

Student Information

Name ______________________________ School ____________________

Grade ________________ Age ________ Sex: Male_____ Female_________

This is a survey of your educational and career plans. The purpose of the survey is to help you think through what you would really like to do, and what you think you will be able to do. There are no right or wrong answers. If there are any words or any part of the instructions that you do not understand, please ask your teacher to explain.

For School Use: DO NOT WRITE IN SPACE BELOW

I. A (1) _______
   A (2) _______
   B (1) a. ______
         b. ______
   B (2) a. ______
         b. ______

II. A (a) _______
    A (b) _______
    B (a) _______
    B (b) _______
    C (a) _______
    C (b) _______
    D (a) _______
    D (b) _______

SE Code: _________
Rdng: _________
Congruency: _________

PART I - MY EDUCATIONAL PLANS

A. From the following list of curriculum areas:

(1) The one that best describes my present course of study is curriculum area number ________.

(2) The one that best describes the course of study that I would really like to be taking is curriculum area number ________.

Curriculum Areas - Select from this list for your answers to items A. (1) and A. (2) above, and place the number of your answer in the blank provided for each item.

1. General education
2. Business education
3. Agriculture
4. Home economics
5. Fine arts
6. Practical arts
7. Vocational education
8. Social science
9. Math and physical science
10. College preparatory
11. Other (specify)__________
____
12. I don't know

B. From the following list of educational plans:

(1) a. The one that best describes what I will probably do is educational plan number________.

b. How certain are you about your answer? Circle:

1 - if you are quite certain (have made definite plans and/or prepared for this area)
2 - if you are indefinite (have thought about it but made no plans)
3 - if you are quite uncertain at this time.

(2) a. The one that best describes what I would really like to do is educational plan number________.

b. How certain are you about your answer? Circle:

1 - if you are quite certain (have made definite plans and/or prepared for this area)
2 - if you are indefinite (have thought about it but made no plans)
3 - if you are quite uncertain at this time.

Educational Plans - Select from this list for your answers to items B. (1a) and B. (2a) above, and place the number of your answer in the blank provided for each item.

1. Not finish high school.
2. Graduate from high school and get a job with no further education.
3. Graduate from high school and become a housewife.
4. Graduate from high school and enter military service.
5. Attend a private technical, business, or trade school.
6. Graduate from high school and get a job where I can get on-the-job training.
7. Attend a public junior or community college where I can get vocational or technical training.
8. Complete a degree or certificate program in a junior college.
9. Attend a junior college and then transfer to a four year college or university.
10. Go right to a four year college or university.
11. Complete graduate work in a college or university.
12. Other (specify) ____.
13. I don't know.

PART II - MY CAREER PLANS

Instructions: Each of the following items has two parts:

(a) Respond to part (a) of each item by selecting the one career area from the list on the following page that best completes the statement. You need only to write the number of the career area in the blank following the statement.

(b) Respond to part (b) of each item by choosing the number that best describes how certain you are about your answer to part (a) of the item. Circle:
1 - if you are quite certain (have made definite plans and/or prepared for this area)
2 - if you are indefinite (have thought about it but made no plans)
3 - if you are quite uncertain at this time.

A. (a) My greatest lifetime ambition would be to follow a career in area number ________.

(b) How certain are you about your answer? 1 2 3

B. (a) Realistically I probably will follow a lifetime career in area number ________.

(b) How certain are you about your answer? 1 2 3

C. (a) When I finish my planned education I would like to enter an occupation in career area number ________.

(b) How certain are you about your answer? 1 2 3

D. (a) When I finish my planned education I am quite sure I can get a job in career area number________.

(b) How certain are you about your answer? 1 2 3

Career Areas - Select from this list for your answers to items A, B, C, and D on the preceding page.

1. OFFICE WORK - (bookkeeper, cashier, secretary, paymaster, bill collector, stenographer, stock clerk, business-machine operator, hotel clerk, etc.)
2. MANAGERIAL WORK - FARM
3. MANAGERIAL WORK - BUSINESS (store, gas station, garage, insurance agency, hotel, repair shop, credit manager, building manager, etc.)
4. SALES WORK - (real estate, insurance, retail store, farm implements, auctioneer, etc.)
5. SKILLED TRADE WORK - (machinist, carpenter, auto mechanic, electrician, millwright, bricklayer, etc.)
6. FACTORY WORK - PRODUCT PROCESSING (machine operator, assembler, packer, etc.)
7. RAW MATERIAL PRODUCING OR PROCESSING - (mine worker, lumberman, farm worker, cattleman, etc.)
8. PUBLIC SERVICE - GENERAL (postman, fireman, policeman, military service, government or political work, etc.)
9. PUBLIC SERVICE - PERSONAL (barber, beautician, food service, hotel housekeeper, undertaker, hospital attendant, etc.)
10. AMUSEMENT AND RECREATION SERVICE - (professional athlete, movie theater worker, amusement park or carnival worker, park or forest ranger, lifeguard, etc.)
11. CREATIVE ARTS - (photographer, artist, writer, poet, journalist, sculptor, etc.)
12. PERFORMING ARTS - (dancer, actor, singer, comedian, musician, etc.)
13. PROFESSIONAL WORK - (nurse, doctor, lawyer, engineer, accountant, teacher, counselor, minister, dentist, chemist, biologist, county agent, pharmacist, etc.)
14. PUBLIC TRANSPORTATION, UTILITIES, OR COMMUNICATION WORK - (truck driver, airplane pilot, railroad worker, mover, telephone worker, seaman, electric power worker, disc jockey, newscaster, etc.)
15. CONSTRUCTION WORK - (house builder, road and bridge work, heavy equipment operator, structural steel worker, concrete worker, excavator, etc.)
16. FINANCE OR INSURANCE WORK - (banker, insurance claim adjuster, stock and bond broker, loan agent, etc.)
17. OTHER - (if you cannot find your choices in the above, specify here the career area or occupation that best answers items A, B, C, or D and enter the number 17 in the space following the item). ____________________
____.

CASE STUDY

Case B
Birthdate - September, 1962
Sex - Female
Grade - First

In April, 1968 Child B was registered for beginning first grade in the fall of 1968. She followed the screening procedure set up by Project Success in which information was gathered concerning the child, parents, siblings, home environment, and medical history. Hearing and vision were checked. The Screening Test of Academic Readiness (STAR) and the Simkov Test of Motor Perceptual Ability were administered. During the second week of school the Metropolitan Readiness Test administered.

The results of the screening indicated that much difficulty in the first year of school might be anticipated with weaknesses evident in the areas letters, numbers, spatial relations, motor perceptual problems, and emotional and social problems.

Immediately after starting school it was evident that Child B was lacking in experiential background and was extremely shy and withdrawn. She is a dependent twin who has overshadowed by her outgoing twin brother. She and her brother were placed in different classrooms.

Early in September she was given a Peabody Picture Vocabulary Test which indicated her mental development was normal. It was decided that the child development counselor would work very closely with the teacher in observing Child B's reactions in the classroom.

Observations revealed that Child B's shyness prevented her from participating in the class activities, and consequently she was not able to learn, even though she had the mental ability to learn. The teacher and teacher aide gave her special attention in trying to help her to take part in the learning activities. She did not respond very well even to individual attention.

Since Child B's emotional and social problems were hindering her in responding to the learning activities in the classroom, the counselor shared the case with the counselor coordinator who gave her some suggestions for working with this withdrawn girl to help improve her self-concept.

The learning specialist was also called in, and after studying the information available in the records, working individually with the child, and conferring with teacher, counselor, and principal, recommendations were made.

Since her initial screening and poor performance in readiness work indicated that she was having difficulty in the motor perceptual area, she was placed in the group receiving motor perceptual training.

In order to help prepare Child B for academic work and to aid in her social and emotional adjustment, she was placed with a very small group receiving developmental or pre-readiness training. They were offered an integrated program in language arts, social studies, math, science, art, and music that would: develop skills in oral expression, listening, following directions, thinking, visual discrimination, and auditory perception; provide learning experiences in which each child achieves some degree of success; help the child to work both within a group and independently. After a few days of participation in this individualized program, Child B began to show signs of coming out of her psychological shell.

During this time the counselor was seeing Child B in some counseling sessions, as well as some casual contacts, trying to establish a warm relationship between Child B and an adult to remove the apparent fear of adults.

Child B was showing signs of improvement but help and cooperation were needed from the parents. A conference with the mother revealed the fact that Child B had on many occasions been told by her grandmother that she would never be able to learn to read. This, along with the influence of her more aggressive twin brother, had helped her in developing a very inadequate self-concept. The mother was willing to cooperate and was given suggestions by the counselor as to what she might do at home to help in Child B's emotional and social development.

It was also decided that further testing by the psychometrist would be of value since Child B seemed to be more withdrawn than any other child in first grade. The results indicated that, even though she had normal mental ability, her emotional problem was hindering her from progressing in her academic work. It was recommended that she remain in the programs in which she was working.

Child B was reevaluated by the teacher, counselor, and learning specialist. She had begun to show improvement in all areas of her development, especially, in development of motor perceptual skills, in her interaction with others, in her feelings about herself, and she was beginning to read.

During her first year in school Child B progressed from readiness to academic work usually presented in the first year of school. Her academic progress was commensurate with her overall ability to function at the time but was not commensurate with her mental potential. More progress was made in reading than in other academic areas.

By the end of the first year Child B had made much improvement in the development of motor perceptual skills and in emotional and social adjustment but more improvement needed to be made. It was recommended that Child B be placed in the corrective second grade for the next year. This was a small group of children who had not made as much progress as would have been desirable and who would receive much individual help. Her reading program included the Stern Structural Reading Series, the Alphabetic-Phonetic-Structural-Linguistics Manual, and Scott, Foreman's Open Highways. At the beginning of the second year, Child B was working on first grade level in arithmetic. Her individualized math program included material from the Holt, Rinehart and Winston Math Book, first grade level; Holt masters; Sets and Numbers, Book 1; Suppes masters; Visualizing Elementary Mathematics Kit A from L. W. Singer; concrete materials such as counting frames, counting man, flannel board aids, etc. She reached second grade level during the year and was placed in Sets and Numbers, Book 2 by Suppes.

Child B continued to participate in motor perceptual training for two years, at which time reevaluation indicated she no longer needed the training. Such training was received from the Developing Learning Readiness program. She was still weak in oral communication skills and so was included in all class activities that would develop such skills.

At the end of the first year Child B was placed in the Ginn Tutorial program but was withdrawn one month later. She did not respond positively due to feeling insecure at being taken from the classroom for the private tutoring.

A Frostig Visual Perception Test given Child B during the second year indicated a weakness in the areas of Form Constance III and Spatial Relations V. She was placed in the Frostig Remediation program working in these areas.

A slight gain was made during her second year in school. More growth was observed socially and emotionally than in the academic area. Child B was again given the advantage of working in a class with a small number of children during her third year in school. She completed the Stern Structural Reading Series and was reading in Open Highways, third grade level at the end of the year. She was working in arithmetic in Sets and Numbers Book 3. She continued to receive counseling services and help in oral language development.

Child B finished her third year in school with academic achievement below the national norm. Improvement had to be made, however, in social and emotional areas before academic learning could take place. Child B by the end of the third year did have a much better concept of self. Although the mother was interested in the child and willing to help, the fact that the home background was deprived both socially and economically, hindered both mother and child.

In the opinion of teachers and project staff members, Child B without the extra pupil personnel services could possibly have developed a more severe emotional problem and would have been deficient in academic skills.

Appendix C: Examples of Process Monitoring and Reporting

- Process Monitoring
- Process Evaluation Instrument
- Projected Activity - Outcome Summary
- Activities Summary
- Project SUCCESS
  - Daily Work Sheet
  - Pupil Types
  - Program Prescriptions
  - Parent Consultation Summary
  - Counselors Log
  - Psychologist/Psychometrist
- Parent Opinion Survey
- Teacher Survey of Pupil Personnel Functions
- Confidential Teacher Evaluation of Title III Project

UMC-75

Process Monitoring

Performance Objective______________Expected Completion Date__________

Time Interval_______ _______ Staff____________________________________
From To

Other Staff	Organization	Content	Method	Materials/Facilities

Performance Indicators (current proficiency level estimates): ____

____

____

____

Comments:____

____

PROCESS EVALUATION INSTRUMENT

Directions for Using the Instrument:

The process square is left blank if the process has not been done.

The process square is marked with diagonal slash marks if the process is currently being done, but it is to be completed at a later date.

The process square is filled in completely and appears solid if the process has been completed.

The process percent of proficiency is available as shown by the portion of solid and blank space.

Explanation: The form is designed to show a continuous flow of processes. The elementary, middle school and high school process evaluation instruments may be sequenced in vertical order to show the flow of educational levels and development of concepts.

(adapted from forms developed by Andrews Independent School District, Andrews, Texas, 1974)

PROCESS EVALUATION INSTRUMENT
ANDREWS ISD ELEMENTARY GUIDANCE PROGRAM

1.0 EDUCATIONAL DOMAIN	2.0 CAREER DOMAIN	3.0 SOCIAL DOMAIN
1.1 Awareness of the educational setting	2.1 Awareness of the world of work	3.1 Awareness of social responsibilities, opportunities and expectancies
1.111 Possibly will be omitted	2.111	3.111
1.112	2.112	3.121
1.113		3.122
1.114		3.131
1.115	NO	3.141
1.116	PROCESS	3.142
1.117		NO PROCESS
1.118		
1.2 Awareness of self in the educational setting	2.2 Awareness of self in the world of work	3.2 Awareness of self in the social setting
1.211	NO	3.211
1.212	PROCESS	3.221

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
I. Self Awareness													
To become aware of self-characteristics related to career development.													
1.1													
Group Discussion	x	x	x	x									
Use of guidance kits i.e. DUSO		x	x	x									
Comparing self with others.	x	x	x	x									
1.2													
Resource persons					x	x	x						
Field trips					x	x	x						
Simulations					x	x	x						
Gaming					x	x	x						
Audio-visual aids					x	x	x						
1.3													
Simulations								x	x	x			
On-job-experiences								x	x	x			
Group discussions								x	x	x			
Job requirement search								x	x	x			
1.4													
Aptitude testing											x	x	x

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group / Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
Hands-on experience											x	x	x
On-the-job experience											x	x	x
Interest testing											x	x	x
II. Career Awareness													
To develop awareness of the psychological, economical, and sociological aspects of work and of careers.													
2.1													
Field trips	x	x	x	x									
Games	x	x	x	x									
Resource people	x	x	x	x									
Subject matter tie-ins	x	x	x	x									
2.2													
Field trips					x	x	x						
Games					x	x	x						
Resource people					x	x	x						
Subject matter tie-ins					x	x	x						
Audio-visual aids					x	x	x						
2.3													
Hands-on activities								x	x	x			

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
Research individual								x	x	x			
2.4													
Guidance kits & books								x	x	x			
Group discussions								x	x	x			
Resource persons								x	x	x			
Field experience								x	x	x			
Audio-visual aids								x	x	x			
Games													
Interlocking													
2.5													
Co-op work experience											x	x	x
Hands-on activities											x	x	x
Research individual											x	x	x
Placement in part-time and/ or summer jobs											x	x	x
III. Decision Making													
To develop career decision-making knowledge and skills.													

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
3.1													
Listing of choices students make daily followed by discussion	x			x									
Opportunity to make more decisions in school	x			x									
3.3													
Research projects								x	x	x			
Group work								x	x	x			
Interviewing skills as information seeking method								x	x	x			
3.4													
Selection of areas for study											x	x	x
Selection of academic courses in relation to career areas											x	x	x
IV. Career Preparation													
To develop understandings of the relationships between academic work and career preparation, and to progress in personal career preparation.													

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
4.1													
Use of guest speakers	x	x	x	x	x	x	x						
Fusing information into curriculum	x	x	x	x	x	x	x						
Field trips	x	x	x	x	x	x	x						
Simulation	x	x	x	x	x	x	x						
4.2													
Duties assigned	x	x	x	x									
4.3													
Role playing					x	x	x						
Characteristics by teacher in classroom management					x	x	x						
4.4													
Role playing								x	x	x			
Actual interviews								x	x	x			
Guest speakers								x	x	x			
Use of books and pamphlets								x	x	x			
4.5													
Playing educational games								x	x	x	x	x	x
Audio-visual aids								x	x	x	x	x	x
Fusing								x	x	x	x	x	x

CRISP & LIBERTY PROJECTED ACTIVITY-OUTCOME SUMMARY BY GROUP 1974-1975

Group Outcome-Process Activity	K	1	2	3	4	5	6	7	8	9	10	11	12
Role playing								x	x	x	x	x	x
Actual interviews								x	x	x	x	x	x
Guest speakers								x	x	x	x	x	x
Use of books and pamphlets								x	x	x	x	x	x
V. Placement													
For the pupil to attain educational and/or occupational placement upon separation from the school.													
5.1													
Job placement center under coordinator or committee								x	x	x	x	x	x

ACTIVITIES SUMMARY

Grade Level	Major Activities	Objective	Time Line
Primary EMR	Unit entitled: "The Supermarket"	2.1 4.1 4.3	3 weeks
Grade 1	Unit entitled: "Careers in Transportation	1.1 2.1 3.1 4.1 4.2	3 weeks
Grade 2	Units entitled: "The Post Office"	1.1 2.1 3.1 4.2	6 weeks
	"Dairy Foods"	1.1 2.1 3.1 4.2	4 weeks
	"The Newspaper"	1.1 3.1 4.1 4.2	3 weeks
	The second grade teacher allowed her pupils to play a game called: "What's My Line?"	1.1 3.1	Usually periods of 1/2 hour at different times during the year.
Grade 3	Units entitled: "How We Get Foods"	2.1 3.1 4.2	4 weeks
	"Where We Get Clothing"	2.1 4.2 3.1 1.1	3 weeks
	"How We Send and Receive Messages"	4.1 2.1 4.2 3.1	3 weeks

ACTIVITIES SUMMARY

Grade Level	Major Activities		Objective	Time Line
Grade 4	Units entitled:	"The Hospital"	1.2 2.2 4.3	4 weeks
		"The Protective Services"	2.2 1.2 4.3 4.1	3 weeks
Grade 5	Units entitled:	"The Automotive Industry"	1.2 2.2 4.3 4.1	6 weeks
		"The Construction of Housing"	2.2 4.1 1.2	6 weeks
		"The Hospital"	3.2 4.1 4.3	7 weeks
		"The Hotel-Motel Industry"	4.1 1.2 4.3	6 weeks
Grade 6	Units entitled:	"An Occupational Tour of Germany, France, England, Spain, and Switzerland"	2.2 4.1 3.2 1.2	5 weeks
		"The Health Clinic"	2.2 3.2 4.1 4.3	2 weeks
		"The Newspaper Industry"	3.2 1.2 4.1 4.3	2 weeks
Grade 7	The P.E.C.E. course taught on the seventh grade level helps to fulfill a number of objectives of the project. The following activities which are part of P.E.C.E. help to fulfill said objectives.			

ACTIVITIES SUMMARY

Grade Level		Major Activities	Objective	Time Line
Grade 7	a.	Pupils are taken on numerous tours in the business and professional community.	1.3 2.3 3.3 4.5	1-hour visits set up approximately 6 times per student.
	b.	Pupils were given hands-on experiences in the community.	1.3 2.3 3.3	2-hour visits set up approximately 4 times per student.
	c.	Small group discussions were held in order to discuss job settings, psychological pressures of jobs, values of work in society, etc.	1.3 2.3 2.4	Approximately 10 hours were used during each quarter for small group discussions.
	d.	Pupils spent time during the quarter researching occupations in which they were interested by using the S.R.A. Widening Occupational Roles Kit, and several books such as *Occupational Outlook Handbook*, *Encyclopedia of Careers and Vocational Guidance*, *Dictionary of Occupational Titles*, and *Career Education Resource Guide*.	2.3 2.4 3.3	Each pupil spent approximately 18 hours per quarter researching occupations of interest.
	e.	Pupils viewed filmstrips and films in order to gather information about careers, requirements for entry and other factors concerned with jobs. Filmstrips were shown on job-seeking techniques.	2.3 2.4 3.3 4.4 4.5	2 hours
	f.	Resource people were invited to talk to the classes.	2.3 2.4 2.5	4 hours

ACTIVITIES SUMMARY

Grade Level	Major Activities	Objective	Time Line
Grade 7 (Cont)	g. Career tapes were used to familiarize pupils with selected jobs.	1.3 2.3 2.4 3.3	2 hours
	h. Pupils were asked to discuss ways of obtaining employment.	4.4	30 minutes
	i. Pupils were asked to role play a job interview.	4.4	15 minutes
	j. Pupils were asked to fill out a job application.	4.4	30 minutes
	k. Pupils were taught interview techniques and allowed to practice in class before going out to interview workers.	3.3	30 minutes
	l. Pupils made use of want-ads from the newspapers as a follow-up activity in seeking ways of obtaining employment and to learn educational needs and job requirements.	4.4 4.5	30 minutes
	m. Pupils were given the opportunity to discuss their interests and abilities and also decision making activities in choosing careers according to their interests and abilities.	1.3 2.4	4 hours
Grade 8	At this grade level, all pupils were exposed to a 12 week mini-prevocational course in each of the three areas of business, home economics and industrial arts.		
	a, Pupils are provided with input through films, filmstrips, tapes, guest speakers and books.	1.3 2.3 2.4 2.5	These activities are mixed with the other class activities and would vary in length according to the course taken.

ACTIVITIES SUMMARY

Grade Level	Major Activities	Objective	Time Line
Grade 8 (Con't)	b. Pupils are given miniature work experiences in each of the three areas.	2.3 2.5 4.5	40 hours per quarter
	c. Pupils role play job interviews and describe employment seeking techniques and fill out application blanks.	4.4	30 minutes
Grade 9	Pupils who are selected for C.V.A.E. (Coordinated Vocational and Academic Education) on the ninth grade level are exposed to the following techniques which help accomplish the stated objectives:		
	a. Role playing of the job interview and various situations which might occur on jobs.	1.3 2.4 4.4	Interspaced with other class activities throughout the school year.
	b. Pupil participate in small group discussions.	1.3 2.5 3.3	All during the school year.
	c. Pupils are asked to write out a career plan as they view it at their stage of development.	3.3	1 hour
	d. Pupils are placed on jobs for part of the school day.	1.3 2.4	2-6 hours per day
	e. Pupils will use resource books, filmstrips, films, tapes and records to gather information about a specific occupation of interest.	2.3 2.4 3.3 4.5	20 hours
	The I.A.C.P. materials for the World of Construction and the World of Manufacturing are used.	1.3 2.3 2.4 4.4 4.5	9 months

ACTIVITIES SUMMARY

Grade Level	Major Activities	Objective	Time Line
Grade 9 (Con't)	Prevocational courses in the areas of agriculture, home economics and business are offered.	2.3 2.4 4.5	9 months
Grades 10-12	At the senior high school, students in tenth through the twelfth grade are offered one-hour courses in: 1) office occupations, 2) agriculture, 3) drafting, 4) forestry and 5) home economics.	1.4 2.5 3.4 4.5	9 months
	The C.V.E. Coop program is offered to students in the twelfth grade who wish to work for part of the school day.	1.4 2.5 3.4 4.5 4.6	9 months
	Pupils are offered two-hour cluster courses in the following areas: 1) metals, 2) transportation, 3) electromechanical, 4) agriculture production,5) clothing and textiles, 6) construction, and 7) health occupations.	1.4 2.5 4.5 4.6	9 months
Grades 9-12	By fusing career information into the science curriculum through the techniques of field trips, guest speakers, research work in a chosen career field and individual study units.	2.6 2.7 2.8	9 months
Grades 8-12	Through a cooperative effort of the Job Placement Coordinator, the C.V.E. coordinator, the C.V.A.E. coordinator, the high school counselors and the visiting teacher, all school leavers who desire help will be placed in either employment, or in an educational program.	5.1	12 months

PROJECT SUCCESS DAILY WORK SHEET

NAME ____________ POSITION ____________ DATE ____________ SCHOOL ____________

Task Area

I Average Child
II Slow Maturing Child
III Slow Learner
IV Envir. Disadv. Child
V Accelerated Learner
VI Emotionally Disturbed
VII Neurologically Handicapped
VIII EMR
PT Proportional to all types
A Administrative
C Control Schools
NP Non-Project Activities

Task Code

1. Assessment
2. Inservice
3. Behavioral Modification
4. Preparation
5. Parental Involvement
6. Dissemination
7. Absenteeism

Task Area	Task Code	Time Spent Hours	Time Spent Minutes	No. Students	Grade
	TOTAL				

TYPES OF PUPILS WITH DESCRIPTIONS

With the stipulation that these are not definition and are not intended as an effort to "type" children. These terms are used as a matter of necessity.

I. Average Child

A child who has an IQ of 90-110 and who has no significant emotional, social or physical handicaps which might impede his overall development.

II. Slow Maturing Child

A child who has an IQ of 90-110 but has not developed socially, emotionally, physically, or academically according to his chronological age expectation.

III. Slow Learner

A child who has been evaluated by a psychologist and found to have an IQ of 81-89.

IV. Environmentally Disadvantaged Child

A child who, because of home, school, or society has not attained basic skills necessary for academic achievement in accordance with his potential. This child may have suppressed IQ due to social factors however, should have an IQ range of 90-110.

V. Accelerated Learner

A child who shows greatly advanced mental ability for his own life age. The IQ should range upward from 120. The advanced development could be evident either in intellectual or creative function.

VI. Emotionally Disturbed Child

A child who evidences a significant lag in social and/or emotional development as evaluated by a trained psychologist.

VII. Neurologically Handicapped Child

A child who has minimal brain dysfunction to the extent of impeding normal progress in academic achievement. Progress could be impeded in any one area or a combination of the following areas:

1. Visual Motor
2. Visual Perception
3. Auditory Perception
4. Motor
    - a. Gross
    - b. Fine

VIII. Educable Mentally Retarded Child

A child who has been evaluated by a trained psychologist and found to have an IQ score of 50-80.

TYPES OF PROGRAMS WITH DESCRIPTIONS

A. Linguistic Reading Program

A linguistic reading program provides the child with an insight into relationship between our spoken and written language. Each child is led to discover for himself than alphabetical symbols are transcriptions of the sound elements in spoken words. Thus writing is recognized to be a way of transcribing speech to a page. He discovers that the spoken and the written word has a definite structure. The child learns by discovering certain basic principles about our language. He soon is able to attack unfamiliar words by recognizing word patterns.

B. Basal Reading Program

A basal reading program is identified here as being the adopted basal reading text or texts in Cobb County Schools, Marietta, Georgia. Supplementary materials are used.

C. Tutorial Program

A tutorial program is any program in which one person works with one child individually following a prescribed plan.

D. Oral Language Development Program

An oral language development program is one which is designed to stimulate oral communication and conceptualization. By learning to express feelings and ideas, a child's concept of self is enhanced.

E. Developmental Grouping

The Developmental Grouping is designed for those children who are not thought ready for academic work because of developmental lags, poor experiential backgrounds, blockage of one or more learning channels, or emotional or social immaturities.

F. Motor Perceptual Program

The motor perceptual programs are designed to remedy or compensate for motor and/or perceptual deficits identified in some children. Areas in which programs are offered include visual motor, visual perception, and gross and fine motor skills.

G. Child and/or Family Depth Counseling

The Child and/or Family Depth Counseling Programs serve any child where special psychological services are needed. The services may include primary play therapy, individual counseling, primary group counseling for behavioral problems, primary group counseling for the gifted, parent counseling, and teacher counseling.

H. Educable Mentally Retarded Class

The Educable Mentally Retarded Class is the special class provided by the Cobb County School System for those children who have been identified, evaluated and recommended for placement by a qualified psychologist.

I. Enrichment Program

The Enrichment Program is designed to provide stimulating and challenging learning experiences above the basic skill level.

J. County Adopted Math Program

The County Adopted Math Program is identified here as being the adopted math text in Cobb County Schools, Marietta, Georgia. Supplementary materials are used.

K. Multi-Media Math Programs

The Multi-Media Math Programs are provided for those children who have difficulty in learning basic math concepts. Multi-sensory learning experiences are provided for these students.

L. Broadening of Basic Skills Program

The Broadening of Basic Skills Program provides opportunities for reinforcement and reteaching of basic skills in all content areas.

M. Movement Exploration

Movement Exploration is a technique for teaching physical education to preschool and primary grade children. The objectives of this program are to develop skills of movement which will not only contribute to successful participation in games and sports but which are necessary in everyday life as well. Movement Exploration helps to develop the basic perceptual motor, skills which are needed for a child's successful participation in formal educational activities and is a medium for helping children understand what their bodies can do.

POSSIBLE PROGRAM PRESCRIPTIONS FOR TYPES OF PUPILS

NEED FOR PROGRAMS IN PARENTHESES WILL VARY ACCORDING TO INDIVIDUAL PUPILS

I. Average Child

A. Linguistic Reading or B. Basal Reading
J. County Adopted Math Program
L. Broadening of Basic Skills
M. Movement Exploration

A J L M or B J L M

II. Slow Maturing Child

A. Linguistic Reading or B. Basal Reading
C. Tutorial
(D.) Oral Language Development
(E.) Developmental Grouping
(F.) Motor Perceptual
(G.) Child and/or Family Depth Counseling
K. Developmental Math Program
M. Movement Exploration

A C (D) (E) (F) (G) K M
B D (D) (E) (F) (G) K M

III. Slow Learner

A. Linguistic Reading or B. Basal Reading
C. Tutorial
(D.) Oral Language Development
(F.) Motor Perceptual
(G.) Child and/or Family Depth Counseling
K. Developmental Math Program
M. Movement Exploration

A C (D) (F) (G) K M
B C (D) (F) (G) K M

IV. Environmentally Disadvantaged Child

A. Linguistic Reading or B. Basal Reading

C. Tutorial
(D.) Oral Language Development
(E.) Developmental Grouping
(F.) Motor Perceptual
(G.) Child and/or Family Depth Counseling
L. Broadening of Basic Skills
J. County Adopted Math Program or K. Multi-Media Math Program
M. Movement Exploration

A C (D) (E) (F) (G) L J M
A C (D) (E) (F) (G) L K M
B C (D) (E) (F) (G) L J M
B C (D) (E) (F) (G) L K M

V. Accelerated Learner

A. Linguistic Reading or B. Basal Reading
(G.) Child and/or Family Depth Counseling
I. Enrichment
J. County Adopted Math Program
M. Movement Exploration

A (G) I J M
B (G) I J M

VI. Emotionally Disturbed Child

A. Linguistic Reading or B. Basal Reading
C. Tutorial
(D.) Oral Language Development
(E.) Developmental Grouping
(F.) Motor Perceptual
G. Child and/or Family Depth Counseling
(L.) Broadening of Basic Skills
J. County Adopted Math Program or K. Multi-Media Math Program
M. Movement Exploration

A C (D) (E) (F) G (L) J M
A C (D) (E) (F) G (L) K M
B C (D) (E) (F) G (L) J M
B C (D) (E) (F) G (L) K M

VII. Neurologically Handicapped Child

A. Linguistic Reading
C. Tutoring
(D.) Oral Language Development
(E.) Developmental Grouping

F. Motor Perceptual
G. Child and/or Family Depth Counseling
(L.) Broadening of Basic Skills
J. County Adopted Math Program or K. Multi-Media Math Program
M. Movement Exploration

A C (D) (E) F G (L) J M
A C (D) (E) F G (L) K M

CONSULTATION WITH PARENTS

	School A	School B	School C	School D	Totals
Academic progress	42	29	30	50	151
Learning Disabilities	10	31	29	15	85
Social Needs	6	16	36	17	75
Health problems	18	2	7	7	34
Physical Needs	13	9	31	20	73
Emotional Adjustment	59	28	38	46	171
Screening Results	57	85	33	44	219
Permission to test	7	86	5	1	99
Special Education	13	32	6	17	68
Placement of Children	2	2	3	8	15
Pupil-Teacher Relationship	12	9	11	7	39
Pupil-Parent Relationship	8	2	24	23	57

A survey of parent contacts and involvement:

1. Parent Orientation
2. Screening
3. Individual Testing
4. Parent-Teacher Conferences
5. Parent-Teacher-Counselor Conferences
6. Informing Parents at PTA
7. Special Reading Workshops for Parents
8. Telephone Calls
9. Notes
10. Home Visits
11. Teacher Aides
12. Parents as Teaching Aides (Tutoring)
13. Observation of Class
14. Demonstration of New Teaching Materials
15. Demonstration of Ginn Tutorial Method
16. Volunteer Mothers' Assistance
17. Meeting with Students in Weekly Groups
18. Group Therapy--Psychologist
19. Letters
20. Individual conferences
21. Training for Parent volunteers in the Motor Perceptual Program
22. Referrals by parents
23. Follow-up activities; parents help behavior of children at home
24. Parent Opinion Survey
25. Special conference with parent as Team Member
26. Grade mothers planned Christmas Parties
27. Grade mothers planned Field Trips
28. Parents bought games for the children
29. Parents made cakes for the teachers' lounge
30. Parents made bean-bags for children to play with

31. One parent bought material for curtains
32. Another parent made the curtains
33. PTA took teachers out to lunch one day during Post-planning week
34. PTA gave teachers gifts of appreciation at Christmas
35. Grade mothers sent a box of candy for each child on the last day of school
36. Volunteer parents helped with the dyslexia class
37. Grade mothers stayed with class for teachers to go to meetings
38. Parents helped transfer children to different schools for further testing
39. Parents came to classrooms as resource people describing their occupations
40. Volunteer mothers worked in the clinic
41. Volunteer mothers worked in the library

Parent-Teacher conferences were held on a regular basis throughout the life of the project. Reports from one of the experimental schools shows that during March 1969 the first grade teachers had the following parent-teacher conferences:

Parents attending Parent-Teacher Conferences 72%

Percentages for each teacher:

First Teacher	85%
Second Teacher	69%
Third Teacher	63%

Total enrollment	97
Total number of parents attending	70
Total mothers only attending	56
Total fathers only attending	4

Of the 27 parents that did not have a conference:

7 Mothers work
6 had sickness in family
2 did not have transportation
4 did not have telephone
8 disinterested

Total conference hours for the three teachers: 33 hours 20 minutes.

During the year 1970-71, the teachers in one experimental school filed the following report in regards to parent-teacher conferences. A first grade teacher said she had approximately 60 parent conferences. Twenty different mothers helped her on several field trips. She also spoke to fifteen parents on the telephone. She talked to some of them more than once.

A second grade teacher said she had approximately 45 parent conferences. Three parents assisted her in testing and four assisted her in the library.

A third grade teacher said she had approximately 100 parent conferences. She said about ten parents volunteered to help in the library. Five parents accompanied her on field trips. Parents taking part in classroom work, visitation, and talking about occupations (Career Development) numbered at fourteen.

I-PS #22
SCHOOL________________________

COUNSELOR________________________

PROJECT SUCCESS

Child Development Counselors Log

SCREENING, ANALYSIS, AND IDENTIFICATION

________ Administer and/or coordinate group tests:

- ________ Metro Readiness
- ________ Star
- ________ Simkov
- ________ Vision
- ________ Hearing
- ________ List others

________ Administer individual tests:

- ________ PPVT
- ________ List others
- ________ ITPA

________ Collect, organize, and analyze information about students

________ Plan and implement the school testing program

DEMONSTRATION AND DISSEMINATION

________ Preparing memos or newsletters

________ Attending Meetings

________ Participating in panel discussions

________ Sharing program with visitors and/or tour groups

________ Using video tape

________ Preparing bulletin boards

________ List others

I-PS #22
CHILD DEVELOPMENT COUNSELORS LOG
Page 2

NEW PROFESSIONAL MODELS

________ Attending meetings of professional groups

________ Attending faculty meetings

________ Participating in staff meetings

________ Reading and studying professional literature

________ Participating in in-service sessions

________ List others

AUXILIARY SERVICES

Educational Secretary

Daily Supervision

TEACHER AIDES

________ Interviewing applicants

________ Consulting with regard to tasks

________ Scheduling of time

________ Training periods

________ Planning activities

________ Checking on Ginn Tutorial Program

________ Planning for Developmental Program

EVALUATION OF PROJECT

________ Coordinating administration and collection of evaluative measures for the Project

I-PS #22
CHILD DEVELOPMENT COUNSELORS LOG
Page 3

COORDINATION: TEAM APPROACH

(Prescription, In-Service Education,
and Curriculum Modification)

Consultation with Psychologist regarding:

________ Retarded students

________ Emotional problems

________ Social needs

________ Behavioral problems

________ Parent Conferences

________ Teacher attitudes

________ Individual tests (Selection, Administration, and Interpretation)

________ In-service education

________ Therapy with students

________ Placement of students

________ List others

Consultation with Psychometrist regarding:

________ Individual testing

________ Collection of data

Consultation with Learning Specialists regarding:

________ Diagnosis of learning problems

________ Individually tailored instructional programs

________ Appropriate instructional materials and methods

________ In-service education

________ Ginn Tutorial Programs

________ Developmental Programs

________ List others

Consultation with Counselor Coordinator regarding:

________ Overall program plans

________ Procedures for activities

________ In-service education

________ List others

I-PS #22
CHILD DEVELOPMENT COUNSELORS LOG
Page 4

Consultation with Director regarding:

________ Total program plans

________ List others

Consultation with Teachers regarding:

________ Student Academic progress

________ Learning Disabilities

________ Social needs

________ Emotional problems

________ Behavioral problems

________ Physical needs

________ Observation

________ Test Interpretation

________ Prescriptive plan for instruction

________ Use of new materials

________ Project Success activities

________ Placement of children

________ Activities of aides

________ List others

Consultation with Principal regarding:

________ Group test scores

________ Placement of exceptional students

________ Utilization of Project services

________ Pupil-Teacher relationships

________ Social needs of specific student

________ Teacher Aide activities

________ Ginn Tutorial Program

________ Physical needs of students

________ Emotional problems of individual students

________ Prescriptive programs planned

________ In-service education plans

________ Student Academic Progress

________ List others

________ Developmental Program

Consultation with parents regarding:

________ Academic progress

________ Learning disabilities

________ Physical problems

________ Social needs

________ Health problems

________ Emotional adjustment

________ Permission to test

________ Special Education

________ Pupil-Teacher relationship

________ Pupil-Parent relationship

________ Screening results

________ Placement of children

________ List others

Consultation with other professional people:

________ Visiting Teacher

________ Speech Therapist

________ Nurse

________ Home Bound Teacher

________ Special Education Consultants

________ Consultant for Emotionally Disturbed

________ Community Agencies (List)

________ Teacher of Visually Impaired

________ Coordinator of Pupil Personnel Services

________ List others

Counseling:

Individual students regarding:

________ academic ________ social ________ emotional, and ________ physical needs

Small groups regarding:

________ academic ________ social ________ emotional, and ________ physical needs

Group Guidance Sessions (List topics of discussion)

________ Talked informally with students

Miscellaneous

________ Health Clinic

________ List others

NUMBER OF REFERRALS:

1st year students ________ Boys ________ Girls

2nd thru 6th year ________ Boys ________ Girls

I-PS #30
PSY.-2/69

PROJECT SUCCESS

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG

SCREENING, ANALYSIS, AND IDENTIFICATION	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
Administer and/or coordinate group tests						
General Readiness						( )
Motor Perceptual						( )
Vision						( )
Hearing						( )
List Others						( )
Administer Individual Tests						
PPVT						( )
Bender-Gestalt						( )
Frostig						( )
Rorschach						( )
Thematic Apperception Test						( )
Children Apperception Test						( )
Lateral Dominance						( )
Draw-a-Person						( )
WISC						( )
WAIS						( )
Stanford-Binet						( )
ITPA						( )
Columbia Mental Maturity Scale (CMMS)						( )
List Others						( )
Analyzing information about students						( )
Writing diagnoses and prescriptions						( )

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Page 2

	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
DEMONSTRATION AND DISSEMINATION						
Preparing memos or newsletters	___	___	___	___	___	(___)
Attending Meetings	___	___	___	___	___	(___)
Participating in panel discussions	___	___	___	___	___	(___)
Sharing program with visitors and/or tour groups	___	___	___	___	___	(___)
Using video tape	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
NEW PROFESSIONAL MODELS						
Attending meetings of professional groups	___	___	___	___	___	(___)
Attending faculty meetings	___	___	___	___	___	(___)
Participating in staff meetings	___	___	___	___	___	(___)
Reading and studying professional literature	___	___	___	___	___	(___)
Participating in in-service sessions	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
COORDINATION: TEAM APPROACH						
Consultation with Child Development Counselors						
Retarded students	___	___	___	___	___	(___)
Emotional problems	___	___	___	___	___	(___)
Social needs	___	___	___	___	___	(___)
Behavioral problems	___	___	___	___	___	(___)
Parent Conferences	___	___	___	___	___	(___)
Teacher attitudes	___	___	___	___	___	(___)
Individual tests (Selection, Administration, and Interpretation	___	___	___	___	___	(___)

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Coordination: Team Approach (continued)
Page 3

	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
Consultation with Child Development Counselors (continued)						
In-service education	___	___	___	___	___	(___)
Therapy with students	___	___	___	___	___	(___)
Placement of students	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation between Psychometrist and Psychologist regarding:						
Individual testing and interpretation	___	___	___	___	___	(___)
Collection of data	___	___	___	___	___	(___)
In-service Training	___	___	___	___	___	(___)
Consultation with Learning Specialists regarding:						
Diagnosis of learning problems	___	___	___	___	___	(___)
Individually tailored instructional programs	___	___	___	___	___	(___)
Appropriate instructional materials and methods	___	___	___	___	___	(___)
In-service education	___	___	___	___	___	(___)
Developmental Programs	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation with Counselor Coordinator regarding:						
Overall program plans	___	___	___	___	___	(___)
Procedures for activities	___	___	___	___	___	(___)
In-service education	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Coordination: Team Approach (continued)
Page 4

	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
Consultation with Director regarding:						
Total program plans	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation with Teachers regarding:						
Student Academic progress	___	___	___	___	___	(___)
Learning Disabilities	___	___	___	___	___	(___)
Social needs	___	___	___	___	___	(___)
Emotional problems	___	___	___	___	___	(___)
Behavioral problems	___	___	___	___	___	(___)
Physical needs	___	___	___	___	___	(___)
Observation	___	___	___	___	___	(___)
Test Interpretation	___	___	___	___	___	(___)
Prescriptive plan for instruction	___	___	___	___	___	(___)
Project Success activities	___	___	___	___	___	(___)
Placement of Children	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation with Principal regarding:						
Group test scores	___	___	___	___	___	(___)
Placement of exceptional students	___	___	___	___	___	(___)
Pupil-Teacher relationships	___	___	___	___	___	(___)
Social needs of specific student	___	___	___	___	___	(___)
Physical needs of students	___	___	___	___	___	(___)
Emotional problems of individual students	___	___	___	___	___	(___)

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Coordination: Team Approach (continued)
Page 5

	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
Consultation with Principal regarding: (continued)						
Prescriptive programs planned	___	___	___	___	___	(___)
In-service education plans	___	___	___	___	___	(___)
Student Academic Progress	___	___	___	___	___	(___)
Developmental Program	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation with parents regarding:						
Academic progress	___	___	___	___	___	(___)
Learning disabilities	___	___	___	___	___	(___)
Physical problems	___	___	___	___	___	(___)
Social needs	___	___	___	___	___	(___)
Health problems	___	___	___	___	___	(___)
Emotional adjustment	___	___	___	___	___	(___)
Special Education	___	___	___	___	___	(___)
Pupil-Teacher relationship	___	___	___	___	___	(___)
Pupil-Parent relationship	___	___	___	___	___	(___)
Screening results	___	___	___	___	___	(___)
Placement of children	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Consultation with other professional people:						
Visiting Teacher	___	___	___	___	___	(___)
Speech Therapist	___	___	___	___	___	(___)
Nurse	___	___	___	___	___	(___)

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Coordination: Team Approach (continued)
Page 6

	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
Consultation with other professional people:						
Home Bound Teacher	___	___	___	___	___	(___)
Special Education Consultants	___	___	___	___	___	(___)
Consultant for Emotionally Disturbed	___	___	___	___	___	(___)
Community Agencies (List)	___	___	___	___	___	(___)
Teacher of Visually Impaired	___	___	___	___	___	(___)
Coordinator of Pupil Personnel Services	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)
Counseling:						
Individual students regarding:						
Academic Needs	___	___	___	___	___	(___)
Social Needs	___	___	___	___	___	(___)
Emotional Needs	___	___	___	___	___	(___)
Physical Needs	___	___	___	___	___	(___)
Small Groups regarding:						
Academic Needs	___	___	___	___	___	(___)
Social Needs	___	___	___	___	___	(___)
Emotional Needs	___	___	___	___	___	(___)
Physical Needs	___	___	___	___	___	(___)
Group Guidance Sessions by Schools	___	___	___	___	___	(___)
Talked informally with students	___	___	___	___	___	(___)
Miscellaneous:						
Health Clinic	___	___	___	___	___	(___)
List others	___	___	___	___	___	(___)

I-PS #30
PSY.-2/69

PSYCHOLOGIST AND PSYCHOMETRIST WEEKLY LOG
Page 7

NUMBER OF REFERRALS:	MON.	TUE.	WED.	THU.	FRI.	(TOT.)
First Year Students:						
Boys	___	___	___	___	___	(___)
Girls	___	___	___	___	___	(___)
Second thru Sixth Year Students:						
Boys	___	___	___	___	___	(___)
Girls	___	___	___	___	___	(___)
Evaluation of Project:						
Telephone Calls With:						
Child Development Counselors	___	___	___	___	___	(___)
Parents	___	___	___	___	___	(___)
Principals	___	___	___	___	___	(___)
Teachers	___	___	___	___	___	(___)
Students	___	___	___	___	___	(___)
Central Staff	___	___	___	___	___	(___)
Other Agencies	___	___	___	___	___	(___)
Coordinating administration and collection of evaluative measures for the Project	___	___	___	___	___	(___)

UMC-68

PARENT OPINION SURVEY

Name______________________________________Mother____Father____
(check one)

Name(s) and Grade(s) of Child(ren) in school____________________

____

Directions:

This survey is made up of 32 statements about teachers, schools, and education There are no right or wrong answers Your personal opinion about each statement is most important Read each statement and choose the answer that best shows your opinion about that statement Study the following example carefully

Example:

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Education is worthwhile.	SA	A	U	D	SD

If you strongly agree with the statement, circle SA.

If you agree, circle A.

If you are undecided, circle U.

If you disagree, circle D.

If you strongly disagree, circle SD.

There is no time limit, but work as quickly as you can. Please give an answer to every statement

339

I. Opinions regarding parent-school relationships

1 Parents should take an interest in school matters. SA A U D SD

2. Parent-teacher conferences are useful to parents. SA A U D SD

3 P T A meetings are useful to parents SA A U D SD

4. The school should make every effort to inform new parents of its program. SA A U D SD

5. Personal contacts with the school are useful to parents. SA A U D SD

6. Parents should understand the policies and programs of the school. SA A U D SD

7. Teachers should visit the homes of their students SA A U D SD

8 The school should help parents understand how their children are doing SA A U D SD

II Opinions regarding the work and competency of teachers

1 Teachers work enough days in the year SA A U D SD

2 Teachers should be better paid SA A U D SD

3 Teachers should have free periods during the day SA A U D SD

4 Most teachers are well qualified to do their job SA A U D SD

5 Most teachers work hard at their daily jobs SA A U D SD

6. Most teachers are well adjusted persons. SA A U D SD

7 Most teachers have a good understanding of their students' behavior. SA A U D SD

8. Most teachers are able to meet new and changing conditions SA A U D SD

III. Opinions regarding school curriculum and extra-curricular activities

1.. The school should have activities such as school plays and Christmas programs SA A U D SD

2. The school should give attention to the students individual needs SA A U D SD

3 Teachers should be free to teach the way they want SA A U D SD

4 The school should help students get along with each other SA A U D SD

5. The school should have a counselor. SA A U D SD

6 The school should correct students for bad behavior. SA A U D SD

7. The counselor should see every student. SA A U D SD

8. The school should help students with personal problems. SA A U D SD

IV. Opinions regarding the importance of education

1. Education helps students succeed in life. SA A U D SD

2. Education helps students be happy in life. SA A U D SD

3. Parents should encourage their children to finish high school. SA A U D SD

4. Education is important even if it causes extreme hardships on parents. SA A U D SD

5. An education is necessary to get a good job. SA A U D SD

6. For those not going to college it is necessary to get training in a skill or craft. SA A U D SD

7. Radio and television should be used to encourage young people to stay in school. SA A U D SD

8 Teachers and counselors should emphasize the importance of education. SA A U D SD

UMC-68

TEACHER SURVEY OF PUPIL PERSONNEL FUNCTIONS

Instructions: (read carefully)

The statements on the attached sheets relate to functions that may, or may not, have been performed in your school by the staff of the Title III project or by other designated specialists on the regular staff of the school. Please give (1) your opinion as to whether the functions *are performed* in your school, and (2) your opinion of whether you think the functions *should be performed* (regardless of whether they were actually carried out) by some pupil personnel specialist. Remember record *two opinions* for each function by (1) darkening the space under one of the columns in the *are performed* section, and (2) darkening the space under one of the columns in the *should be performed* section. Record your answers on the right side of each page opposite *each* function.

Survey of Pupil Personnel Functions

Functions of Pupil Personnel Specialists:	These Functions *are* Performed: regularly	sometimes	not at all	do not know	These Functions Should be Performed: regularly	sometimes	not at all	undecided
1. Help parents understand the work of the school.	○	○	○	○	○	○	○	○
2. Use test data to describe individual differences of pupils to teachers and administrators.	○	○	○	○	○	○	○	○
3. Participate in making retention decisions.	○	○	○	○	○	○	○	○
4. Interpret test results to parents (individually or in groups).	○	○	○	○	○	○	○	○
5. Work with teachers in developing positive mental health concepts in the classroom.	○	○	○	○	○	○	○	○
6. Conduct group guidance activities for pupils in educational and social areas.	○	○	○	○	○	○	○	○
7. Serve as a referral source for disciplinary and truancy cases.	○	○	○	○	○	○	○	○
8. Observe pupil behavior in classroom and play activities.	○	○	○	○	○	○	○	○
9. Counsel with individual parents regarding problems of their children.	○	○	○	○	○	○	○	○
10. Help teachers use pupil records to better understand individual behavior.	○	○	○	○	○	○	○	○
11. Help the teacher understand herself in relation to her class.	○	○	○	○	○	○	○	○
12. Help teachers interpret test results.	○	○	○	○	○	○	○	○
13. Help teachers appraise the social development of pupils.	○	○	○	○	○	○	○	○
14. Meet on a regular basis with small groups of pupils who present attendance, behavior, or learning problems	○	○	○	○	○	○	○	○
15. Follow up on the progress of individual pupils.	○	○	○	○	○	○	○	○
16. Work individually (or in groups) with pupils having social or behavior problems.	○	○	○	○	○	○	○	○
17. Conduct child study groups for parents.	○	○	○	○	○	○	○	○
18. Interpret pupil needs as a basis for curriculum evaluation.	○	○	○	○	○	○	○	○
19. Suggest ways to work with problem pupils.	○	○	○	○	○	○	○	○
20. Help teachers understand the social and family factors relevant to the behavior of particular pupils.	○	○	○	○	○	○	○	○
21. Use play activities with pupils having social and behavior problems.	○	○	○	○	○	○	○	○
22. Conduct group sessions to help pupils understand the way groups operate and their own group role.	○	○	○	○	○	○	○	○
23. Assist in securing glasses, shoes, etc. for needy pupils.	○	○	○	○	○	○	○	○
24. Interpret the school guidance program to the public.	○	○	○	○	○	○	○	○
25. Work with the parents of pupils having social or emotional problems.	○	○	○	○	○	○	○	○

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Survey of Pupil Personnel Functions

Functions of Pupil Personnel Specialists:	These Functions *are* Performed:				These Functions Should be Performed			
	regularly	sometimes	not at all	do not know	regularly	sometimes	not at all	undecided
26. Report back to the teacher on pupils referred by the teacher or principal.	○	○	○	○	○	○	○	○
27. Maintain a central file of relevant data on each pupil that is accessible to all teachers.	○	○	○	○	○	○	○	○
28. Help individual pupils (and groups) assess their values in relation to educational and social expectations.	○	○	○	○	○	○	○	○
29. Help pupils improve study and work habits.	○	○	○	○	○	○	○	○
30. Discuss future educational and vocational plans with pupils.	○	○	○	○	○	○	○	○
31. Prepare grade-level occupational information materials.	○	○	○	○	○	○	○	○
32. Visit the home of pupils presenting special problems.	○	○	○	○	○	○	○	○
33. Serve as a consultant to teachers, principals, and supervisors for the improvement of instruction.	○	○	○	○	○	○	○	○
34. Help teachers estimate the learning potential of individual pupils and groups of pupils.	○	○	○	○	○	○	○	○
35. Hold conferences with teachers about special pupil problems.	○	○	○	○	○	○	○	○
36. Conduct group sessions with pupils to improve motivation in school.	○	○	○	○	○	○	○	○
37. Conduct case studies and/or case conferences on pupils presenting special learning or adjustment problems.	○	○	○	○	○	○	○	○
38. Help teachers use methods for modifying the social and educational coping behavior of pupils.	○	○	○	○	○	○	○	○
39. Help teachers identify under-achievers.	○	○	○	○	○	○	○	○
40. Meet with groups of teachers to explain guidance procedures and techniques.	○	○	○	○	○	○	○	○
41. Help pupils make the transition from home to school, and from one grade to another, through group activities.	○	○	○	○	○	○	○	○
42. Screen pupils for special classes for exceptional children.	○	○	○	○	○	○	○	○
43. Make referrals to appropriate specialists in seeking help for pupils.	○	○	○	○	○	○	○	○
44. Serve as a referral source for failing pupils.	○	○	○	○	○	○	○	○
45. Assist teachers in the preparation and interpretation of anecdotal reports.	○	○	○	○	○	○	○	○
46. Assist teachers in conducting parent-teacher conferences.	○	○	○	○	○	○	○	○
47. Diagnose learning difficulties of pupils referred by teachers.	○	○	○	○	○	○	○	○
48. Show and discuss guidance films with class groups.	○	○	○	○	○	○	○	○
49. Assess individual pupil abilities and learning skills.	○	○	○	○	○	○	○	○
50. Provide reading materials dealing with specific problems or interests of individual pupils.	○	○	○	○	○	○	○	○

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PAGE ▮

CONFIDENTIAL TEACHER EVALUATION OF TITLE III PROJECT

The following statements relate to the Pupil Personnel Project supported by Title III, ESEA, in your school system. Please give your frank evaluation of the project by recording your opinion in the space under the appropriate column at the right of each statement. Do not sign your name.

strongly agree
agree
partially agree
disagree
strongly disagree
don't know

1. Teachers are aware of the purposes the project intends to achieve.
2. The project staff works harmoniously and constructively with teachers and principals.
3. Teachers seek help from the project staff when they have problem pupils.
4. The project causes more work than it provides help.
5. Pupils respond positively to activities initiated through the project.
6. The project activities have stimulated parent interest in the school program.
7. The project has not been properly staffed.
8. The project activities have influenced the improvement of instruction.
9. The project staff has alienated some of the other staff members.
10. Pupil attitudes toward school have been influenced by project activities.
11. Feedback from the project staff has not been adequate.
12. Pupil self concepts have been improved through project activities.
13. Teachers understand individual pupil needs, potentialities, and limitations better as a result of project activities.
14. The project has had relatively little impact on pupils, teachers, parents or administrators.
15. The work of the project staff is an important part of the school program and should be continued.

UMC-68

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